
OLR Bill Analysis

sSB 423

AN ACT IMPROVING INDOOR AIR QUALITY IN PUBLIC SCHOOL CLASSROOMS.

SUMMARY

This bill requires the labor commissioner, in consultation with the education commissioner and Office of Policy and Management (OPM) secretary, to establish a school indoor air quality assessment and ventilation monitoring program (i.e., “school air quality program”) by June 30, 2023, for use by local and regional boards of education, regional educational service centers (RESCs), and state charter schools. The school air quality program requires these entities to conduct ventilation assessments that include a number of detailed steps. Under the bill, the Department of Labor (DOL) must require school districts, RESCs, and state charter schools to make the appropriate corrective actions identified in the report resulting from the ventilation assessment.

Under the bill, a certified testing, adjusting, and balancing technician or mechanical engineer must perform the ventilation assessment. The assessment must verify whether the existing mechanical ventilation system is operating in accord with design parameters, meets DOL’s requirements, and follows the recommendations of the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) for ventilation needs during the 2020 coronavirus disease pandemic. The written report produced by the assessment must include any corrective actions needed for a school’s mechanical ventilation system or the heating, ventilation, and air conditioning (HVAC) infrastructure.

By June 30, 2026, and each year thereafter, each school must have an HVAC system in full compliance with the school air quality program standards, but any board of education, RESC, or state charter school will be considered in compliance with the bill’s requirements if it has started

a project to remediate or replace an HVAC system.

Among other related provisions, the bill also:

1. makes certain school HVAC projects eligible to receive state reimbursement grants;
2. establishes standards regarding the mandatory closing of schools if building temperatures are not met for specified periods (within a range of 68 to 76 degrees Fahrenheit);
3. details steps schools must take to establish a complaint process related to indoor air quality; and
4. makes a conforming change in the school construction law for grants to the Connecticut Technical Education and Career System (CTECS, formerly the technical high school system).

Under the bill, “indoor air quality” is the overall potential health factors within a school facility, including air quality, mold levels, and other potentially harmful toxins.

EFFECTIVE DATE: Upon passage, except the sections creating (1) the school air quality program and related requirements and (2) the complaint process are effective July 1, 2022.

§§ 1 & 2 — SCHOOL AIR QUALITY PROGRAM

The bill requires the labor commissioner, in consultation with the education commissioner and OPM secretary (or their designees), to establish the school air quality program by June 30, 2023, for use by boards of education, RESCs, and state charter schools. The program must be consistent with the bill’s requirements and the minimum requirements of the ASHRAE Standard 62.

Existing law requires local and regional boards of education to maintain their HVAC systems in compliance with the prevailing standards, such as Standard 62, when the HVAC system is installed or renovated. It further requires school districts to keep HVAC system maintenance records for five years (CGS § 10-231e). Another existing

law requires districts to adopt and implement an indoor air quality program that provides for ongoing maintenance and facility reviews necessary for the maintenance and improvement of the indoor air quality of their facilities (CGS § 10-220(a)).

Under the bill, the labor commissioner must post the program requirements on DOL's website. ASHRAE Standard 62 means the most recent American National Standards Institute/American Society of Heating, Refrigerating and Air-conditioning Engineers Standard 62.1, entitled "ventilation for acceptable indoor air quality."

The bill requires the labor commissioner, in consultation with the education commissioner and OPM secretary, to (1) approve the school air quality program at least every three years to ensure its efficacy and (2) review the program in the event of a public health emergency or other event potentially impacting air quality in schools.

Ventilation Assessment and Report (§ 2(b))

A certified testing, adjusting, and balancing technician or mechanical engineer must perform ventilation assessments under the school air quality program. The assessment must verify whether the existing mechanical ventilation system is operating in accordance with design parameters, meets DOL requirements, and follows the ASHRAE recommendations.

The bill includes specific items that must be in the HVAC system assessment, including the following:

1. testing for maximum filter efficiency,
2. physical measurements of outside air rate,
3. verification of ventilation components' operation,
4. measurement of all air distribution inlets and outlets,
5. verification of unit operation and performance of required maintenance in accordance with ASHRAE Standard 62.1,

6. verification of control sequences,
7. verification of carbon dioxide sensors, and
8. collection of field data for the installation of mechanical ventilation if none exist.

A mechanical engineer must review the written report produced by the assessment. The report must include any corrective actions needed for a school district's mechanical ventilation system or HVAC infrastructure. Corrective actions can include (1) installation of appropriate filters or carbon dioxide sensors and (2) additional maintenance, repairs, upgrades, or replacement.

Required Corrective Actions (§ 2(d))

DOL must require all boards of education, RESCs, and state charter schools to make the appropriate corrective actions identified in the assessment report. The corrective actions must include testing, adjusting, and balancing the school mechanical ventilation system and, if necessary or cost effective, repair, upgrade, or replacement of the existing HVAC system or the installation of a stand-alone mechanical ventilation system.

The corrective actions identified in the assessment may include the following:

1. general maintenance, reading, and adjustment of ventilation rates;
2. filter replacement to meet a minimum efficiency reporting value of at least 13, if equipment allows, while assuring the pressure drop is less than the fan's capability; and
3. carbon dioxide monitor installation or whole system installation or replacement.

The bill requires portable filtration and air cleaners to be used only if (1) the existing HVAC infrastructure cannot meet minimum filtration and ventilation requirements or (2) recommended by a mechanical

engineer, to enhance the permanent HVAC infrastructure when the desired indoor air quality cannot be maintained with the mechanical ventilation system or there are concerns about outdoor air contaminants (e.g., due to wildfires or pollution).

Three-Year Assessment Schedule (§ 2(c))

Starting by July 1, 2024, and every three years thereafter, each board of education, RESC, and state charter school must conduct a school air quality assessment consistent with the program established in the bill. The written assessment report must be available for public inspection, posted on the entity’s website, and submitted to DOL.

Contractors and Technicians (§ 2(e) & (f))

The bill requires any remediation, additions, or alterations to an HVAC system to be performed by a properly licensed HVAC contractor. The contractor must employ a skilled and trained construction workforce, consisting of journey persons and registered apprentices in accordance with state law governing apprenticeship programs and journey person-to-apprentice ratios at worksites. The bill further requires that at least 60% of the workers are graduates of, or registered in and attending, a DOL-registered apprenticeship program.

Also, all HVAC system testing and certifications must be performed by a properly certified testing, adjusting and balancing technician.

Duty to Maintain HVAC Systems (§ 2(h))

Under the bill, each board of education, RESC, and state charter school is responsible for the ongoing maintenance of HVAC systems in a manner that continually maintains indoor air quality and temperature and humidity ranges in school facilities during school activity hours in accordance with DOL standards (see below). Each board of education, RESC, and state charter school must participate in the federal Environmental Protection Agency’s Air Quality Flag Program for Schools.

Temperature Ranges and Closing Schools (§ 2(a) & (i))

The bill requires each board of education, RESC, and state charter

school to close a school for the day if the school cannot maintain the mandated public school temperature range for two or more consecutive school activity hours. If this happens, it cannot lead to a pay reduction for any board employee or board-contracted individual who was scheduled to work on that day.

Under the bill, “public school temperature range” is a temperature from 68 to 76 degrees Fahrenheit, and the “public school relative humidity range” is relative humidity levels within 20% to 60%.

The bill requires DOL, by August 15, 2022, to establish mandatory public school temperature and humidity ranges. The temperature and relative humidity readings for public school facilities must be taken in a location or locations that are illustrative of the highest and lowest temperature and relative humidity in the school during school activity hours. “School activity hours” means any time of day in which students or school personnel occupy school facilities throughout the year.

§§ 2(j) & 4 — DEADLINE FOR COMPLIANCE WITH SCHOOL AIR QUALITY PROGRAM

Under the bill, by June 30, 2026, and each year thereafter, each board of education, RESC, and state charter school must (1) have HVAC systems in their schools that can fully comply with the bill’s school air quality program standards and (2) operate and maintain the systems in accordance with the standards.

Under the bill, any board of education, RESC, or charter school starting a project to remediate, replace, or install an HVAC system is considered in compliance with the bill’s requirements, including the June 30, 2026, deadline. The bill deems compliant any board or state charter school that submits a completed school construction project application to remediate, replace, or install an HVAC system to maintain indoor air quality.

§ 3 — STATE REIMBURSEMENT GRANTS FOR HVAC SYSTEMS

By law, the administrative services commissioner, within the limits of available funds, can approve school construction grants under certain emergency situations outside of the standard application deadlines.

The bill makes the installation, remediation, or replacement of HVAC systems necessary to maintain indoor air quality and temperature and humidity ranges in school facilities in accordance with DOL's standards eligible to receive state reimbursement for eligible costs under this emergency provision.

Under existing law, the emergency provision is used to remedy damages due to fire, catastrophe, and code violations, among other things. Existing law also allows it to be used to remedy a certified school indoor air quality emergency, which can only be declared by the public health commissioner in specific situations.

§ 5 — COMPLAINTS AND INVESTIGATIONS

The bill requires each board of education, RESC, and state charter school to designate a staff member to be responsible for receiving and reporting to the superintendent (or appropriate person in the case of an RESC or charter school) complaints of mold, evidence of pest infestation, hazardous odors or chemicals, and poor indoor air quality. The complaint process must be posted on the school's or district's website.

Under the bill, each entity must forward complaints to (1) the appropriate board at either the next regularly scheduled meeting or within 60 days, whichever is earlier, and (2) any bargaining agent representing workers at the affected building.

The relevant board of education, RESC, or state charter school must investigate the complaint, including documentation of any physical symptoms shown by students, staff, or visitors.

The bill includes the following as possible documentation:

1. urgent care referrals;
2. blood tests;
3. an OSHA 301 form or incident report forms;
4. workers' compensation claims; and

5. testing of any visible substance, including mold, chemicals, pest droppings, infestations, or other substances, for the presence of a health hazard.

If there is a confirmed health hazard, the board, RESC, or state charter school must (1) notify DOL's Division of Occupational Safety and Health and (2) create and implement a plan to remedy the hazard.

The bill bans retaliating against, disciplining, or terminating any employee for making an air quality complaint or reporting conditions on indoor air quality. Any employee of a board of education, RESC, or state charter school who believes that he or she has experienced discrimination, retaliation, discipline, or termination for these reasons may submit a complaint with DOL alleging the violation under the state CONN-OSHA law against retaliation for health and safety complaints.

§ 6 — SCHOOL AIR QUALITY AND CTECS

The bill makes the installation, remediation, or replacement of HVAC systems needed to continually maintain indoor air quality and temperature and humidity ranges in school facilities eligible to receive grants for the full cost of these projects for CTECS schools. To be eligible, the system must comply with DOL's standards under the bill. As a state-owned and -operated system, CTECS receives grants to cover 100% of the costs of these projects (unlike school districts, who must pay a portion of the project costs depending upon a formula that uses the property wealth of the town).

BACKGROUND

Related Bills

sSB 428, (§ 1), favorably reported by the Education Committee, establishes a grant program to reimburse boards of education for projects to improve indoor air quality in school buildings.

HB 5479, favorably reported by the Public Health Committee, requires the Department of Public Health to establish an indoor air quality monitoring program for public schools.

COMMITTEE ACTION

Labor and Public Employees Committee

Joint Favorable

Yea 12 Nay 0 (03/22/2022)