



# Senate

General Assembly

**File No. 213**

February Session, 2024

Substitute Senate Bill No. 287

*Senate, April 3, 2024*

The Committee on Education reported through SEN. MCCRORY, D. of the 2nd Dist., Chairperson of the Committee on the part of the Senate, that the substitute bill ought to pass.

## ***AN ACT CONCERNING INDOOR AIR QUALITY IN SCHOOLS.***

Be it enacted by the Senate and House of Representatives in General Assembly convened:

1 Section 1. Section 370 of public act 22-118, as amended by section 42  
2 of public act 23-167, is repealed and the following is substituted in lieu  
3 thereof (*Effective from passage*):

4 (a) There is established a working group to study and make  
5 recommendations related to indoor air quality within school buildings.  
6 Such recommendations shall include, but need not be limited to:

7 (1) The optimal humidity and temperature ranges to ensure healthy  
8 air and promote student learning;

9 (2) Threshold school air quality emergency conditions warranting  
10 temporary school closures based on the presence of insufficient heat, an  
11 excessive combination of indoor temperature and humidity levels, or  
12 some other thresholds;

13 (3) Criteria for rating the priority of heating, ventilation and air

14 conditioning repair and remediation needs, including the public health  
15 condition and needs of the students attending a school;

16 (4) Optimal heating, ventilation and air conditioning system  
17 performance benchmarks for minimizing the spread of infectious  
18 disease;

19 (5) Protocols to be used by school districts to receive, investigate and  
20 address complaints or evidence of mold, pest infestation, hazardous  
21 odors or chemicals and poor indoor air-quality;

22 (6) The frequency with which local and regional boards of education  
23 should be providing for a uniform inspection and evaluation program  
24 of the indoor air quality within school buildings, such as the  
25 Environmental Protection Agency's Indoor Air Quality Tools for  
26 Schools Program, and whether such program should be provided for at  
27 all schools or only at those constructed before or after a certain date;

28 (7) Best practices for the proper maintenance of heating, ventilation  
29 and air conditions systems in school buildings, including the frequency  
30 and scope of such maintenance;

31 (8) A system of equitable distribution of funds, based on need, under  
32 the heating, ventilation and air conditioning system grant program  
33 pursuant to section 10-265r of the general statutes, as amended by this  
34 act;

35 (9) Ways to make the reports and results of the uniform inspections  
36 and evaluations of the indoor air quality and heating, ventilation and  
37 air conditioning systems of school buildings, conducted pursuant to  
38 section 10-220 of the general statutes, as amended by [this act] public act  
39 22-118, accessible and searchable;

40 (10) Any other criteria affecting school indoor air quality; and

41 (11) Proposals for legislation to carry out any of the recommendations  
42 of the working group.

43 (b) The working group shall consist of the following members:

44 (1) Three appointed by the president pro tempore of the Senate, one  
45 of whom is a representative of ConnectiCOSH, one of whom is a  
46 representative of the Associated Sheet Metal and Roofing Contractors of  
47 Connecticut, and one of whom is a member of the Senate;

48 (2) Three appointed by the speaker of the House of Representatives,  
49 one of whom is a specialist in the field of children's health, one of whom  
50 is a representative of the Connecticut State Building Trades Council, and  
51 one of whom is a member of the House of Representatives;

52 (3) Two appointed by the majority leader of the Senate, one of whom  
53 is a representative of the American Federation of Teachers-Connecticut  
54 and one of whom is a representative of the Connecticut Association of  
55 Public School Superintendents;

56 (4) Two appointed by the majority leader of the House of  
57 Representatives, one of whom is a representative of the Connecticut  
58 Education Association and one of whom is a representative of the  
59 Connecticut Association of Boards of Education;

60 (5) Two appointed by the minority leader of the Senate, one of whom  
61 is a specialist in the field of medicine on respiratory health and one of  
62 whom is a representative of the Council of Small Towns;

63 (6) Two appointed by the minority leader of the House, one of whom  
64 is an industrial hygienist and one of whom is a representative of the  
65 Mechanical Contractors of Connecticut;

66 (7) Two appointed by the Governor, one of whom is a school nurse  
67 and one of whom is a representative of the Connecticut Conference of  
68 Municipalities;

69 (8) The Secretary of the Office of Policy and Management, or the  
70 Secretary's designee;

71 (9) The Commissioner of Education, or the commissioner's designee;

72 (10) The Commissioner of Administrative Services, or the  
73 commissioner's designee;

74 (11) The Labor Commissioner, or the commissioner's designee;

75 (12) The Commissioner of Public Health, or the commissioner's  
76 designee;

77 (13) The Commissioner of Consumer Protection, or the  
78 commissioner's designee; and

79 (14) The Commissioner of Energy and Environmental Protection, or  
80 the commissioner's designee.

81 (c) All appointments to the working group shall be made not later  
82 than sixty days after the effective date of this section. Any vacancy shall  
83 be filled by the appointing authority.

84 (d) The member of the Senate appointed by the president pro  
85 tempore of the Senate pursuant to subdivision (1) of subsection (b) of  
86 this section and the member of the House of Representatives appointed  
87 by the speaker of the House of Representatives pursuant to subdivision  
88 (2) of subsection (b) of this section shall serve as the chairpersons of the  
89 working group. Such chairpersons shall schedule the first meeting of the  
90 working group, which shall be held not later than sixty days after the  
91 effective date of this section.

92 (e) (1) Not later than July 1, [2024] 2025, and annually thereafter until  
93 July 1, 2029, the working group shall submit a progress report on its  
94 findings and recommendations to the Governor and the joint standing  
95 committees of the General Assembly having cognizance of matters  
96 relating to education, labor and public health, in accordance with the  
97 provisions of section 11-4a of the general statutes.

98 (2) Not later than January 1, 2030, the working group shall submit a  
99 final report on its findings and recommendations to the Governor and  
100 the joint standing committees of the General Assembly having  
101 cognizance of matters relating to education, labor and public health, in

102 accordance with the provisions of section 11-4a of the general statutes.

103 (3) The working group shall terminate on July 1, [2024] 2030, or on  
104 the submission of the final report, whichever is later.

105 Sec. 2. Subdivision (3) of subsection (d) of section 10-220 of the 2024  
106 supplement to the general statutes is repealed and the following is  
107 substituted in lieu thereof (*Effective July 1, 2024*):

108 (3) [Prior to January 1, 2025, and every five years thereafter, a] (A) For  
109 the period commencing July 1, 2025, and ending and including June 30,  
110 2030, each local or regional board of education shall provide for a  
111 uniform inspection and evaluation of the heating, ventilation and air  
112 conditioning system within each school building under its jurisdiction.  
113 During such period, the board shall provide such inspection for at least  
114 twenty per cent of the schools under its jurisdiction in each year until  
115 each such school has been inspected. Each such school shall be so  
116 inspected every five years thereafter. The Department of Administrative  
117 Services may, upon request of a local or regional board of education,  
118 grant a waiver of the provisions of this subparagraph if the department  
119 finds that (i) there is an insufficient number of certified testing, adjusting  
120 and balancing technicians, industrial hygienists certified by the  
121 American Board of Industrial Hygiene or the Board for Global EHS  
122 Credentialing, mechanical engineers or mechanical contractors licensed  
123 in heating, ventilation and air conditioning systems to perform such  
124 inspection and evaluation, or (ii) such board has scheduled such  
125 inspection and evaluation for a date in the subsequent year. Such waiver  
126 shall be valid for a period not to exceed one year.

127 (B) Such inspection and evaluation shall be performed by a certified  
128 testing, adjusting and balancing technician, an industrial hygienist  
129 certified by the American Board of Industrial Hygiene or the Board for  
130 Global EHS Credentialing, [or] a mechanical engineer or a mechanical  
131 contractor licensed in heating, ventilation and air conditioning systems.  
132 Such heating, ventilation and air conditioning systems inspection and  
133 evaluation shall include, but need not be limited to: [(A)] (i) Testing for  
134 maximum filter efficiency, [(B)] (ii) physical measurements of outside

135 air delivery rate, [(C)] (iii) verification of the appropriate condition and  
136 operation of ventilation components, [(D)] (iv) measurement of air  
137 distribution through all system inlets and outlets, [(E)] (v) verification  
138 of unit operation and that required maintenance has been performed in  
139 accordance with the most recent indoor ventilation standards  
140 promulgated by the American Society of Heating, Refrigerating and  
141 Air-Conditioning Engineers, [(F)] (vi) verification of control sequences,  
142 [(G)] (vii) verification of carbon dioxide sensors and acceptable carbon  
143 dioxide concentrations indoors, and [(H)] (viii) collection of field data  
144 for the installation of mechanical ventilation if none exist. The  
145 ventilation systems inspection and evaluation shall identify to what  
146 extent each school's current ventilation system components, including  
147 any existing central or noncentral mechanical ventilation system, are  
148 operating in such a manner as to provide appropriate ventilation to the  
149 school building in accordance with most recent indoor ventilation  
150 standards promulgated by the American Society of Heating,  
151 Refrigerating and Air-Conditioning Engineers. The inspection and  
152 evaluation shall result in a written report, and such report shall include  
153 any corrective actions necessary to be performed to the mechanical  
154 ventilation system or the heating, ventilation and air conditioning  
155 infrastructure, including installation of filters meeting the most optimal  
156 level of filtration available for a given heating, ventilation and air  
157 conditioning system, installation of carbon dioxide sensors and  
158 additional maintenance, repairs, upgrades or replacement. Any such  
159 corrective actions shall be performed, where appropriate, by a  
160 contractor, who is licensed in accordance with chapter 393. Any local or  
161 regional board of education conducting an inspection and evaluations  
162 pursuant to this subsection shall [(i)] (I) make available for public  
163 inspection the results of such inspection and evaluation at a regularly  
164 scheduled meeting of such board and on the Internet web site of such  
165 board and on the Internet web site, if any, of each individual school, and  
166 [(ii)] (II) submit the report and results of such inspection and evaluation  
167 to the Department of Administrative Services using the form developed  
168 pursuant to section 10-231h. A local or regional board of education shall  
169 not be required to provide for a uniform inspection and evaluation

170 under this subdivision for any school building that will cease to be used  
 171 as a school building within the three years from when such inspection  
 172 and evaluation is to be performed. Any local or regional board of  
 173 education that has provided for an inspection that was performed in a  
 174 different format, but is deemed equivalent by the department, may use  
 175 such inspection in lieu of a uniform inspection and evaluation under this  
 176 subdivision. [The Department of Administrative Services may, upon  
 177 request of a local or regional board of education, grant a waiver of the  
 178 January 1, 2025, deadline for the provision of a uniform inspection and  
 179 evaluation under this subdivision if the department finds that (I) there  
 180 is an insufficient number of certified testing, adjusting and balancing  
 181 technicians, industrial hygienists certified by the American Board of  
 182 Industrial Hygiene or the Board for Global EHS Credentialing or  
 183 mechanical engineers to perform such inspection and evaluation, or (II)  
 184 such board has scheduled such inspection and evaluation for a date after  
 185 January 1, 2025. Such waiver shall be valid for one year.]

186 Sec. 3. Subdivision (3) of subsection (b) of section 10-265r of the 2024  
 187 supplement to the general statutes is repealed and the following is  
 188 substituted in lieu thereof (*Effective July 1, 2024*):

189 (3) The commissioner [shall not] may award a grant under the  
 190 program to [any applicant that, on or after July 1, 2024, has not certified  
 191 compliance with] an applicant for the performance of the uniform  
 192 inspection and evaluation of an existing heating, ventilation and air  
 193 conditioning system pursuant to subsection (d) of section 10-220, as  
 194 amended by this act, except that the commissioner shall not award a  
 195 grant under the program to any applicant for any other purpose  
 196 authorized under this section that has not certified compliance with the  
 197 uniform inspection and evaluation of an existing heating, ventilation  
 198 and air conditioning system pursuant to subsection (d) of section 10-220,  
 199 as amended by this act.

This act shall take effect as follows and shall amend the following sections:		
Section 1	<i>from passage</i>	PA 22-118, Sec. 370

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Sec. 2	<i>July 1, 2024</i>	10-220(d)(3)
Sec. 3	<i>July 1, 2024</i>	10-265r(b)(3)

**ED**      *Joint Favorable Subst.*



The following Fiscal Impact Statement and Bill Analysis are prepared for the benefit of the members of the General Assembly, solely for purposes of information, summarization and explanation and do not represent the intent of the General Assembly or either chamber thereof for any purpose. In general, fiscal impacts are based upon a variety of informational sources, including the analyst's professional knowledge. Whenever applicable, agency data is consulted as part of the analysis, however final products do not necessarily reflect an assessment from any specific department.

**OFA Fiscal Note**

**State Impact:**

Agency Affected	Fund-Effect	FY 25 \$	FY 26 \$
Treasurer, Debt Serv.	GF - Potential Cost	See Below	See Below

Note: GF=General Fund

**Municipal Impact:**

Municipalities	Effect	FY 25 \$	FY 26 \$
Local and Regional School Districts	Potential Revenue Gain	See Below	See Below

**Explanation**

The bill potentially shifts costs incurred by the state and local and regional school districts regarding the testing of indoor air quality in schools and associated grant funding, beginning in FY 25.

The bill allows grants under the school air quality grant program to be awarded for the performance of the uniform inspection and evaluation of existing heat, ventilation and air conditioning systems, while continuing to otherwise disallow grants from the program for districts that have not performed such inspection.

To the extent districts seek and are awarded funds for the inspection under the program, this could result in both potential revenue gain for the district and increased or more rapid use of funds authorized for the program. Likewise, if successful inspection grant awards result in additional districts being in compliance with the inspection

requirement, there may be an increase in applications for projects eligible under the existing school air quality grant program in future years, which could also result in potential revenue gain for districts and increased or more rapid use of funds authorized for the program.

The program is primarily funded through General Obligation (GO) bond funds.<sup>1</sup> Future General Fund debt service costs may be incurred sooner under the bill to the degree that it causes authorized GO bond funds to be expended or to be expended more rapidly than they otherwise would have been. Since April 2023, \$225 million has been allocated for the program. An additional \$150 million of GO bonds become effective on July 1, 2024 under current law. The bill does not change GO bond authorizations relevant to the program.

The bill also allows local and regional school districts to conduct air quality inspections of 20 percent of the buildings under their jurisdiction each year, over the course of five years. This spreads the cost of such inspections over a five-year period, but does not reduce the overall cost of such inspections.

Lastly, the bill extends the reporting deadline for the Indoor Air Quality Working Group. This has no fiscal impact.

### ***The Out Years***

The annualized ongoing fiscal impact identified above would continue into the future subject to inflation.

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<sup>1</sup> \$75 million of American Rescue Plan Act (ARPA) funds were also allocated to the program.

**OLR Bill Analysis****sSB 287*****AN ACT CONCERNING INDOOR AIR QUALITY IN SCHOOLS.*****SUMMARY**

This bill extends, from January 1, 2025, to June 30, 2030, the deadline for local and regional boards of education (i.e., “school boards”) to complete a uniform inspection and evaluation of their school buildings’ heating, ventilation, and air conditioning (HVAC) systems required by law (see BACKGROUND). Beginning July 1, 2025, school boards must conduct the inspection and evaluation in at least 20% of their schools each year until all schools in the district are inspected.

The bill also authorizes the Department of Administrative Services (DAS) to award indoor air quality grants to school boards to conduct the inspection and evaluation. It permits these grants even when a school district has not certified compliance with the inspection and evaluation requirements. Under current law, a school district must be compliant to receive any HVAC grant. (Once in compliance, a district may receive the other HVAC grants for repair, upgrading, and installation work.)

Additionally, the bill extends, from July 1, 2024, to January 1, 2030, the deadline for the school indoor air quality working group to submit its final report to the governor and Education, Labor and Public Employees, and Public Health committees. It also requires annual progress reports from the group.

EFFECTIVE DATE: July 1, 2024, except the provision extending the working group is effective upon passage.

**§ 2 — HVAC INSPECTION AND EVALUATION**

Current law requires school boards to complete the uniform HVAC

system inspection and evaluation in each school building under the board's jurisdiction before January 1, 2025, and thereafter every five years. The bill instead requires school boards to complete the evaluations and inspections during a five-year period from July 1, 2025, to June 30, 2030. Under the bill, school boards must conduct the inspection and evaluation in at least 20% of their schools each year until all schools are inspected. It also requires that each school building be inspected again every five years.

Like current law, the bill allows DAS to grant a waiver from the inspection requirement, upon the request of a school board, if the department finds (1) there is an insufficient number of certified testing, adjusting, and balancing technicians; industrial hygienists certified by the American Board of Industrial Hygiene or the Board for Global EHS Credentialing; or mechanical engineers to perform the inspections and evaluations or (2) the board has scheduled the inspection for a date after the inspection deadline. Specifically, the bill allows DAS to grant a waiver of up to one year from the five-year deadline and the requirement to inspect at least 20% of a district's schools each year. It also specifies that if a waiver is granted because of the inspection's timing, then the inspection must be scheduled for the subsequent year. (Current law allows a one-year waiver and requires that the inspection be scheduled for after January 1, 2025).

The bill also expands the group of professionals who may conduct the inspections and evaluations to include mechanical contractors licensed in HVAC systems.

### **§ 3 — STATE GRANTS FOR HVAC INSPECTIONS**

Current law prohibits the DAS commissioner from awarding grants for HVAC or indoor air quality improvements to school districts that have not certified compliance with the law's inspection and evaluation requirements. The bill makes an exception by allowing the commissioner to award grants to reimburse the cost of performing the inspections and evaluations. Like current law, the bill prohibits her from awarding other grants under the program if the district has not certified

compliance with the inspection and evaluation requirements.

The law allows school boards or regional educational service centers (RESC) to apply for the grants to reimburse costs for projects to install, replace, or upgrade HVAC systems or related improvements. The school board may receive a reimbursement grant for 20%-80% of its eligible expenses, based on its town ranking among all Connecticut towns using property wealth as a measure. As with the school construction grant program, less wealthy towns receive a higher reimbursement rate. RESCs are reimbursed under a similar method that reflects the wealth of the towns served by the RESC.

## **§ 1 — SCHOOL INDOOR AIR QUALITY WORKING GROUP**

The bill extends the deadline, from July 1, 2024, to January 1, 2030, for the school indoor air quality working group to submit its final report to the governor and the Education, Labor and Public Employees, and Public Health committees. It also requires annual progress reports from the working group, with the first due by July 1, 2025, and each following year until July 1, 2029. The group terminates on July 1, 2030, or on the submission of its final report, whichever is later.

Under existing law, the 23-member group must make recommendations to the legislature on a range of issues related to school indoor air quality, including (1) criteria for rating the priority of HVAC repair and remediation needs; (2) optimal HVAC performance benchmarks to minimize the spread of infectious disease; and (3) protocols school districts can use to investigate and address complaints of mold, hazardous odors or chemicals, and poor indoor air quality.

## **BACKGROUND**

### ***School HVAC Inspections***

By law, the HVAC system inspection and evaluation must include the following:

1. testing for maximum filter efficiency;
2. measuring outside air rate;

3. verifying ventilation components' operation;
4. measuring air distribution through all inlets and outlets;
5. verifying unit operation and performance of required maintenance in accordance with American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) standards;
6. verifying control sequences;
7. verifying carbon dioxide sensors and acceptable carbon dioxide indoor air concentrations; and
8. collecting field data (if none exist) for installing mechanical ventilation.

The inspection and evaluation must identify the extent to which each school's current ventilation system, including any existing central or noncentral mechanical ventilation system, is operating to provide appropriate ventilation to the school building according to ASHRAE's most recent indoor ventilation standards. The inspection and evaluation must result in a written report that includes any corrective actions needed for the mechanical ventilation system or the HVAC infrastructure.

**COMMITTEE ACTION**

Education Committee

Joint Favorable Substitute

Yea 44 Nay 0 (03/18/2024)