

Date of Hearing: April 12, 2023

ASSEMBLY COMMITTEE ON EDUCATION
Al Muratsuchi, Chair
AB 384 (Calderon) – As Amended March 23, 2023

SUBJECT: School facilities: maintenance in good repair: recommended interior temperatures: reporting of inventory

SUMMARY: Requires the California Department of Education (CDE) to conduct a study on recommended indoor air temperature ranges and temperature control standards for public schools, to compile a statewide inventory of heating and cooling systems and interventions in all public schools, and to develop policy recommendations for safe indoor air temperature standards for public school facilities. Specifically, **this bill:**

- 1) Requires the CDE to conduct a study on recommended indoor air temperature ranges and temperature control standards for public schools serving kindergarten and grades 1 to 12, inclusive.
- 2) Requires, in conducting the study, the CDE to review data, including, but not limited to, safe and healthy minimum and maximum air temperature in public school facilities, disaggregated by pupil age, and location of the schoolsite.
- 3) Authorizes, in conducting the study, the CDE to collaborate or contract with other public agencies, including, but not limited to, the State Department of Public Health (CDPH), private sector firms, or individuals qualified to perform the necessary services.
- 4) Requires, by January 1, 2026, the CDE to submit a report on the findings and recommendations of the study to the Legislature.
- 5) Requires governing board or body of each local educational agency (LEA) that receives any funds pursuant to the Leroy F. Greene School Facilities Act of 1998 or the California Schools Healthy Air, Plumbing, and Efficiency Program administered by the State Energy Resources Conservation and Development Commission to provide to the CDE, by January 1, 2026, an inventory of heating and cooling systems at each of its schoolsites.
- 6) Requires the governing board or body of each LEA maintaining an elementary or secondary school to include in the School Accountability Report Card (SARC), for each of its schoolsites an inventory of heating and cooling systems at that schoolsite.
- 7) Requires the CDE to compile and, as necessary, update a statewide inventory of heating and cooling systems and interventions in all public schools from the information provided by LEAs pursuant to (5) and (6) above, reducing any potential duplication of collecting the same information more than once from the same LEA.
- 8) Authorizes the CDE to work with the United States Department of Energy's Energy Improvements at Public School Facilities Program to implement this requirement.
- 9) Defines the following:

- a) “Local educational agency” to mean a school district, county office of education (COE), or charter school.
 - b) “Inventory of heating and cooling systems” to mean a list of all heating, ventilation, and air conditioning equipment and systems, including, but not limited to, any of the following: air conditioning, heat pumps, cool roofs, insulation, green schools, window shading, double-paned windows, and air sealing.
- 10) Requires the CDE to develop policy recommendations for safe indoor air temperature standards for elementary and secondary public school facilities based on the aforementioned study findings and statewide inventory. Requires the CDE to also develop policy recommendations that will address how to ensure that public school facilities can maintain a recommended safe indoor air temperature range. Requires the policy recommendations to be flexible and allow schools to phase in to the recommended safe indoor air temperature range. Requires, in developing these policy recommendations, the CDE to consider state climate goals, the Extreme Heat Plan, regional temperature differences, and various methods for maintaining indoor air temperatures that take into account specific factors.
 - 11) Requires the CDE, in developing the policy recommendations to consult with a diverse group of stakeholders with knowledge of education, public health, labor, and other relevant subject matter.
 - 12) Authorizes the CDE, in developing policy recommendations, to collaborate or contract with other public agencies, private sector firms, or individuals qualified to perform the necessary services.
 - 13) Requires, by January 1, 2027, the CDE to submit the policy recommendations to the Legislature.

EXISTING LAW:

- 1) Defines “good repair” to mean a school facility that is maintained in a manner that assures that it is clean, safe, and functional as determined pursuant to a school facility inspection and evaluation instrument developed by the Office of Public School Construction (OPSC) and approved by the State Board of Education (SBE) or a local evaluation instrument that meets the same criteria, and requires the evaluation instrument to include mechanical systems, including heating, ventilation, and air-conditioning systems, that are functional and unobstructed, appear to supply adequate amount of air to all classrooms, work spaces, and facilities, and maintain interior temperatures within normally acceptable ranges. (Education Code (EC) 17002(d))
- 2) Requires the CDE to establish standards for use by school districts to ensure that the design and construction of school facilities is educationally appropriate, promotes school safety, and provides school districts with flexibility in designing instructional facilities. (EC 17251(c))
- 3) Requires, the Department of General Services (DGS), under the police power of the state, to supervise the design and construction of any school building or the reconstruction or alteration of or addition to any school building to ensure that plans and specifications comply with the specified rules and regulations, and to ensure that the work of construction has been

performed in accordance with the approved plans and specifications, for the protection of life and property. (EC 17280)

- 4) Requires, as a condition of child care licensure, a comfortable temperature for children to be maintained at all times. Requires the licensee to maintain the temperature in rooms that children occupy between a minimum of 68°Fahrenheit (F) and a maximum of 85°F. Requires, in areas of extreme heat, the maximum to be 20°F less than the outside temperature. (California Code of Regulations, Title 22, §101239)

FISCAL EFFECT: Unknown

COMMENTS:

Need for the bill. According to the author, “As climate change intensifies, millions of school-age children are burdened by worsening extreme weather-related events, such as heat waves, wildfires, and drought. School facilities located in low-income neighborhoods have historically been underfunded, making climate resilient infrastructure upgrades especially difficult. While public schools play an integral role in educating California’s students, it is imperative that students are provided a healthy learning environment. Not only is there is a lack of consensus regarding safe indoor temperature ranges, there is also a lack of data tracking which schools have adequate heating and cooling interventions.

To maximize learning and health, Assembly Bill 384 requires the California Department of Education (CDE) to conduct a study to determine recommended safe indoor temperature ranges for K-12 public school classrooms. This bill also tasks CDE with tracking and updating information related to heating and cooling management in schools through a statewide database. This bill will help ensure students are attending schools that are both functional and comfortable.”

Climate change impacts in California. California’s climate is generally expected to become hotter, drier, and more variable over the coming decades, increasing the risk of catastrophic wildfires, droughts, floods, extreme weather, biodiversity loss, and sea level rise. California’s Fourth Climate Assessment estimates the economic cost to California for these losses by 2050 will be over \$100 billion annually. Average global temperatures have increased since 1895, with the fastest relative increase beginning in the 1980s. Nine of the ten hottest years recorded have occurred in the last decade. In California, the statewide average temperature is predicted to increase 1.9°F by 2025 and 4.6°F by 2050. Populations in cooler parts of the state, particularly along the coast, are generally at a greater risk for health-related illness because they are less acclimatized to heat, people may be less aware of behaviors to reduce exposure, and the built environment is not designed for warmer temperatures.

Urban areas have higher temperatures than in surrounding areas due to pavement and building materials that absorb sunlight and heat. This phenomenon is referred to as the urban heat island effect. Average daytime temperatures in urban areas are 1-6°F warmer than surrounding areas, but at night that increases to as much as 22°F as the heat is gradually released from buildings and paved surfaces. The urban heat island effect increases the health risks associated with extreme heat for populations living in those areas. A number of strategies can be used to mitigate the urban heat island effect, such as shading, green spaces, and the use of cool building and paving materials.

The impact of heat on students and their academic performance. As climate change intensifies, students are increasingly burdened by worsening heat waves, wildfires, drought, and other extreme weather-related events that hinder their well-being and academic development, according to a 2023 report from the Sean N. Parker Center for Allergy and Asthma Research at Stanford University and other partners, *Climate Resilient California Schools: Safeguarding Children's Health and Opportunity to Learn in TK-12*. Children are particularly vulnerable to extreme weather conditions because their bodies are more sensitive and less capable of self-regulating temperature.

According to a 2022 Legislative Analyst Office report, *Climate Change Impacts Across California K-12 Education*, climate change has led to students experiencing greater learning loss, poorer academic outcomes, food insecurity, and traumatic mental health problems. Moreover, minority children who live in high-poverty neighborhoods are often exposed to more heat, which contributes to racial disparities in health outcomes. School facilities located in low-income neighborhoods have historically had fewer financial resources to invest in efficient HVAC systems, thereby compounding student health risks from worsening climate change.

Indoor temperatures in California public schools are not currently subject to any upper limits in existing law, and schools are not required to have air conditioning or other cooling systems. Indoor classrooms that cannot maintain healthy temperatures exacerbate existing inequities in student and health outcomes (Patel, 2023). According to a 2020 Journal of Human Resources article, *Hot Temperature and High Stakes Performance*, hot temperature reduces performance by up to 13% of a standard deviation and leads to persistent impacts on high school graduation status, despite compensatory responses by teachers who selectively upward manipulate grades after hotter exams. According to a 2020 American Economic Journal: Economic Policy article, *Heat and Learning*, students of color and students in lower-income areas are the most affected by heat-driven learning losses, exacerbating racial and income-based achievement gaps. It is estimated that 5% of the nationwide gap in academic achievement between white and Black students is due to heat and air conditioning disparities.

California lacks an inventory of public school facilities, including heating and cooling devices. While the state has general information on the number of K-12 schools (10,521 schools, including alternative schools), there is not an inventory on the number of school buildings within a schoolsite or the types of facilities in those buildings (e.g., gymnasiums, multipurpose rooms, etc.). Beginning in 2008, school districts applying for state bond funds must complete an informational worksheet on the project. Data on the number of new facilities and the types of facilities constructed since 2008 is available, but is not comprehensive. California does not maintain a statewide database for tracking which schools have air conditioning, appropriately shaded schoolyards, and other heat interventions, according to the 2019 American Society of Civil Engineers *Report Card for California's Infrastructure*. According to a 2020 Public Policy Institute of California (PPIC) report, *Improving K-12 School Facilities in California*, not every California school has adequate access to indoor cooling, making it impossible to universally maintain temperatures ideal for teachers to educate and students to learn. And with limited statewide school facility data, ***the Committee may wish to consider*** it is difficult to know how widespread the problem is, or what the cost of interventions will be.

Recommended Committee Amendments. *Staff recommend that this bill be amended as follows:*

- Require the research study conducted by the CDE on recommended indoor air temperature ranges and temperature control standards to also include a representative sample inventory of heating and cooling systems and interventions in public schools.
- Remove the requirement for the CDE to compile a statewide inventory of heating and cooling systems and interventions in all public schools.
- Remove the requirement for the governing board or body of each LEA maintaining an elementary or secondary school to include in the SARC, for each of its schoolsites an inventory of heating and cooling systems at that schoolsite.

Related legislation. AB 247 (Muratsuchi) of the 2023-24 Session would place the Kindergarten-Community Colleges Public Education Facilities Bond Act of 2024 on the 2024 statewide ballot, to be operative only if approved by voters at that election.

AB 1642 (Gipson) of the 2023-24 Session would require the CDE and the Natural Resources Agency, in consultation with the Division of the State Architect, the OPSC, and any other appropriate state entities to facilitate an interagency and stakeholder engagement process to develop, on or before December 1, 2024, recommendations for a master plan for green schoolyards. Requires a report of the recommendations for a master plan for green schoolyards to be sent to the appropriate policy and fiscal committees of the Legislature on or before December 1, 2024.

SB 28 (Glazer) of the 2023-24 Session would place the Public Preschool, K-12, and College Health and Safety Bond Act on the ballot for the March 2024 statewide primary election.

SB 394 (Gonzalez) of the 2023-24 Session would require the State Energy Resources Conservation and Development Commission to develop a Master Plan for Healthy, Sustainable, and Climate-Resilient Schools on or before November 1, 2024, if an appropriation is made for that purpose. Requires the master plan to include specified elements, including, an inventory of the state's public elementary and secondary school buildings and grounds and a set of priorities, benchmarks, and milestones for health, resilience, and decarbonization of public school campuses and support facilities.

SB 499 (Menjivar) of the 2023-24 Session would require 1) all schoolsites and child care facilities to develop and implement an extreme heat action plan to plant shade trees, install a school garden, and plant a coniferous tree barrier; 2) the CDE, in consultation with the California Department of Social Services (CDSS), to develop a template for an extreme heat action plan, make available a model program guidebook; and, 3) the CDSS to identify a liaison for child care facilities.

SB 515 (Stern) of the 2023-24 Session would exempt the installation of shade structures on the Division of the State Architect's (DSA's) approved pre-check design list from requiring LEAs to also provide an accessible path of travel under the California Building Standards Code.

AB 544 (O'Donnell) of the 2021-22 Session would have required LEAs to provide the CDE information related to each school facility, schoolsite, or school property owned or leased by the LEA. This bill was held in the Senate Education Committee.

AB 2232 (McCarty), Chapter 777, Statutes of 2022, requires a covered school (school district, COE, charter school, private school, the California Community Colleges, the California State University, and requests the University of California (UC), to ensure that facilities, including classrooms for students, have HVAC systems that meet minimum ventilation rate requirements, as specified, and to install filtration that achieves minimum efficiency reporting values (MERV) levels of 13 or higher. Requires the California Building Standards Commission and the DSA to propose for adoption mandatory standards for carbon dioxide monitors in classrooms of a covered school and the UC.

AB 2597 (Bloom) of the 2021-22 Session would have required the Department of Housing and Community Development to develop, propose, and submit to the California Building Standards Commission standards for adequate residential cooling for both new and existing units. This bill was held in the Senate Housing Committee.

SB 1167 (Mendoza), Chapter 839, Statutes of 2016, requires the Division of Occupational Safety and Health to propose to the Occupational Safety and Health Standards Board for review and adoption, a standard that minimizes heat-related illness and injury among workers working in indoor places of employment by January 1, 2019.

AB 1292 (Evans) of the 2005-06 Session would have required school districts to ensure that facilities, including, but not limited to, classrooms, have HVAC systems that meet minimum requirements of indoor air quality, as adopted by the California Occupational Safety and Health Standards Board. This bill was held in the Assembly Appropriations Committee.

AB 2863 (Pavley) of the 2003-04 Session would have required a school district applying for state school facilities funds to include in its plans for new construction and modernization of a school building an indoor air quality management plan, and authorizes the use of certain funds to prevent indoor air problems in school facilities. This bill was held in the Assembly Appropriations Committee.

REGISTERED SUPPORT / OPPOSITION:

Support

None on file

Opposition

None on file

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