

**Attachment B**  
**BSC-03-24-399-Attach B (CO2 & Bicycle)-PT11**

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**Economic and Fiscal Impact Statement (Form 399) Attachment**  
**Amend the 2022 CALGreen for inclusion in the 2025 CALGreen Code,**  
**CCR, Title 24, Part 11**

**BACKGROUND**

This proposed action by BSC adopts mandatory green building standards for occupancies within its authority, building upon a framework of voluntary measures adopted by BSC in 2008 and makes modifications and clarifications to the 2022 CALGreen Code for inclusion in the 2025 CALGreen Code. The intent of the code continues to:

1. Reduce greenhouse gas (GHG) emissions from buildings;
2. Promote environmentally responsible, cost-effective, healthier places to live and work;
3. Promote improving California schools' indoor air quality and overall student and teacher health by monitoring and recording CO2 emissions in classrooms with an emphasis to troubleshooting indoor air quality issues in real time before poor indoor air quality compromises student and teacher health and increases sickness and absenteeism.
4. Promote bicycle ridership, reduce vehicle on roads which reduces GHGs and traffic congestion, the health benefits are both mental and physical of riding a bicycle and other forms of exercise which could reduce health-related costs to business owners; and

Health and Safety Code Section 18930.5 grants BSC the authority, if no state agency has the authority or expertise to propose green building standards applicable to a particular occupancy, to adopt, approve, codify, update, and publish green building standards for those occupancies.

Based on BSCs authority in HSC 18930.5, HSC 18934.5; BSC is proposing regulations for the installation of carbon dioxide (CO2) monitors in new and qualifying additions and alterations in Covered school classrooms which identifies the California State Universities (CSU) and private school classrooms per Education Code 17661(a)(1). Per Education Code 17661(d) the University of California (UC) classrooms are incorporated for the adoption of the proposed building standards.

CO2 monitors are needed in the classrooms so that teachers can identify indoor air quality concerns related to CO2 levels which compromise student and teacher health. An indoor air quality report issued by UC Davis in 2019 formed the basis for the passage of Assembly Bill AB841 which also addresses indoor air quality concerns in classrooms. School reopening concerns related to the COVID-19 pandemic have placed an increased focus and urgency to improve classroom indoor air quality. In September 2022 AB2232 was passed which requires DSA and the Building Standards Commission to develop and propose regulations requiring CO2 monitors in classroom. This proposal aims to provide a mechanism to identify and address indoor air quality concerns with the requirement for carbon dioxide monitors in classrooms. This proposal would require a CO2 monitor be installed in new classrooms and in qualifying additions and alterations pursuant to scoping regulations in CALGreen Code Section 301.1 to existing classrooms.

The benefits of this regulation include improving California schools' indoor air quality and overall student and teacher health by monitoring and recording CO2 emissions in classrooms with an emphasis to troubleshooting indoor air quality issues in real time before poor indoor air quality compromises student and teacher health and increases sickness and absenteeism. Additionally, the required outdoor air that promotes ideal indoor air quality creates the beneficial environment for optimal learning and academic success.

For bicycle parking space regulation updates as required by AB 2863 which directs BSC to develop a building standard for bicycle parking amendments independent of number of vehicular parking spaces in nonresidential buildings.

The proposed code changes to the green building standards with statewide application will lead to substantial environmental benefits through monitoring of indoor criteria pollutants leading to improved public health for students and teachers in classroom environments and for bicycle parking amendments

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promote bicycle ridership, reduce vehicle on roads which reduces GHGs and traffic congestion, health benefits are both mental and physical of riding a bicycle and other forms of exercise which could reduce health-related costs to business owners.

#### **Objectives of the Proposed Amendments**

The objectives of the proposed amendments are to further advance the indoor air quality in classrooms by obtaining CO2 level readings and alerting of potential hazards in classrooms. For bicycle parking regulations, the objective is to increase the installation of bicycle parking racks or lockers by developing a building standard that is independent of number of vehicular parking spaces in nonresidential buildings.

#### **ECONOMIC IMPACT STATEMENT**

Items:

##### **A. ESTIMATED PRIVATE SECTOR COST IMPACTS**

1a. Estimate the economic impact of the proposed amendments for business and/or employees:

For CO2 monitoring = Initial installation costs range \$500-\$1,500.

For Bicycle parking regs=Initial installation costs range \$300-\$4,500.

1b. Estimate the economic impact on small businesses:

Unknown

1c. Estimate the economic impact on jobs and occupancies:

Some jobs may be created for the installation of CO2 monitors and Bicycle parking racks/units.

1f. Imposes prescriptive instead of performance:

BSC has determined that there is no performance option for these proposals.

A2. Describe the types of businesses (Include nonprofits):

Initial costs of the proposed amendments for CO 2 monitoring are between \$500 and \$1,500/unit and Initial costs of the proposed amendments for bicycle parking amendments are between \$300 and \$4,500 per new building or qualifying additions and alterations that add 10 or more visitor foot traffic or tenant-occupants. The cost for these regulations is minimal are less than 1% of the project construction costs. Based on this annual cost estimate, the category "Below \$10 million" was selected for the estimated economic impact.

A3. The types of businesses impacted: For the proposed CO2 monitoring provisions are any businesses funding the new development of nonresidential buildings and qualifying additions and alterations. These businesses could be in manufacturing of CO2 monitoring equipment, Monitoring services, construction trades, Installers, supply chain. For bicycle parking regulations the types of businesses include Manufacturers of bicycle rack equipment other related materials, installers & suppliers.

A6. Total Number of jobs being created or eliminated: No jobs are being eliminated. Unknown how many jobs are being created for the installation on CO2 monitoring equipment and bicycle parking rack/lockers.

##### **B. ESTIMATED COSTS**

1. Estimated Statewide Dollar Costs for Businesses and Individuals.

The proposed amendments require new nonresidential buildings with classrooms and qualifying additions and alterations to existing classrooms to install CO2 monitors. Also, for the installation of bicycle parking racks or lockers for new buildings or qualifying additions or alterations which have or add 10 or more foot traffic visitors or tenant-occupants.

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a) **Costs to Small Business:**  
Initial costs for small business are unknown.

b) **Costs to Typical Business:**

Typical businesses for CO2 monitoring regulations are assumed to be applicable when constructing new or qualifying additions and alterations for classrooms in nonresidential buildings with classrooms for a 5,000 or greater square foot building, specifically for UC and CSU universities and private school classrooms. Also, for qualifying additions and alterations to buildings which trigger the installation of the bicycle parking racks or lockers.

These types of buildings would be affected and would need to comply the CALGreen code. However, some businesses when doing an addition or alteration may be exempt from these regulations if they do not meet the CALGreen scoping provision found in Chapter 3, Section 301.3. The exception stipulates that an alteration to a project that has a permit valuation of less than \$200,000 is exempt. Separately, an addition less 1,000 square feet do not trigger CALGreen requirements. Any additions or alterations that are not exempt and exceed the limits mentioned above would need to comply with the proposed code requirements.

The initial costs to these businesses for CO2 monitoring is a range between \$500-\$1,500.

The initial costs to these businesses for bicycle parking rack or lockers is a range between \$300-\$4,500.

#### **5. Explain the need for State regulation given the existence or absence of Federal regulations:**

Currently there are no federal regulations for mandatory installations for CO2 monitoring in classrooms. Assembly Bill 2232 (Chapter 777, Statutes of 2022) directed BSC to develop mandatory standards for CO2 monitoring in nonresidential buildings. AB 2863 directs BSC to develop a building standard for bicycle parking amendments independent of number of vehicular parking spaces in nonresidential buildings.

#### **C. ESTIMATED BENEFITS**

##### **1. Explain the estimated benefits to be derived from this proposal:**

The benefits of this regulation include improving California schools' indoor air quality and overall student and teacher health by monitoring and recording CO2 emissions in classrooms with an emphasis to troubleshooting indoor air quality issues in real time before poor indoor air quality compromises student and teacher health and increases sickness and absenteeism.

The benefits for the bicycle parking regulations promote bicycle ridership, reduce vehicle on roads which reduces GHGs and traffic congestion, health benefits are both mental and physical of riding a bicycle and other forms of exercise which could reduce health-related cost to business owners. Promotes healthier environments for Californians to live and work.

##### **2. Are the benefits the result of: Specify statutory requirements, or goals developed by the agency based on broad statutory authority?**

The benefits are the result of specific statutory requirement as per Assembly Bill 2232 (Chapter 777, Statutes of 2022) directed BSC to develop mandatory standards for CO2 monitoring in nonresidential buildings. AB 2863(2022) Directs BSC to develop building standards for bicycle parking amendments in CALGreen. BSC broad statutory authority is to develop green building standards per Health and Safety Code 18930.5.

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**3. Briefly describe any expansion of business currently doing business within the State of California that would result from this regulation.**

The proposal is likely to promote the expansion of some businesses for the Manufacturers of bicycle rack equipment another related materials, suppliers, installers, and construction trades.

**FISCAL IMPACT STATEMENT**

**Items:**

**A. FISCAL EFFECT ON LOCAL GOVERNMENT**

**6. Other. Explain.**

Currently, local government building departments are responsible for enforcing the California Green Building Standards Code, Title 24, Part 11. There should not be any major fiscal effect on local governments to enforce a mandatory requirement in nonresidential new construction or qualifying additions and alterations. However, if there is a minor increase of costs to local governments to review and check plans for compliance, any increase in costs can be recovered from increases in permit fees and from the building permit application fees as per HSC 18931.6. When local governments are constructing new office (5,000 SF) buildings or qualifying additions the typical initial costs added are \$300-\$4,500 for bicycle parking regulations.

**B. FISCAL EFFECT ON STATE GOVERNMENT**

**4. Other. Explain.**

For the CO2 monitoring regulations, there is no Impact on state governments as this proposal only applies to UC/CSU university classrooms and private charter school classrooms. The bicycle Racks/locker costs to state agencies constructing a new office (5,000 SF) buildings or qualifying additions ranges from \$300-\$4,500. Bicycle parking Fiscal impact costs from these regulations are subject to legislative approval.