SENATE COMMITTEE ON ENERGY, UTILITIES AND COMMUNICATIONS
Senator Benjamin Allen, Chair
2025 - 2026 Regular

Bill No:	AB 2200	**Hearing Date:**	6/30/2026
Author:	Hart		
Version:	4/13/2026 Amended		
Urgency:	No	**Fiscal:**	Yes
Consultant:	Sarah Smith		

SUBJECT: Controlled environment horticulture space: thermal curtains

DIGEST: This bill requires the California Building Standards Commission (CBSC) to adopt a standard developed by the California Energy Commission (CEC) to allow certain indoor agriculture buildings and air-conditioned greenhouses to use alternative technologies instead of using double-paned glass windows.

ANALYSIS:

Existing law:

1) Establishes the CEC's authority to create regulations for building efficiency standards. Existing law requires the CEC to create cost-effective regulations for lighting, insulation, climate control systems, and other building design and construction standards that increase energy and water efficiency for new residential and new nonresidential buildings. Local governments may not issue permits for construction and installation projects that fail to comply with the CEC's certified efficiency standards. (Public Resources Code §25402)

2) Requires the CEC's building water and energy efficiency standards to be cost effective for the economic life of the building when compared to historic practice. When determining an efficiency standard's cost effectiveness, the CEC must consider the value of the water or energy saved, impact on product performance for consumers, and the life-cycle cost of the standard. Existing law also requires the CEC to consider an efficiency standard's impact on housing costs, the total statewide costs and benefits of the standard over its lifetime, the economic impact on California businesses, and any alternative approaches and their associated costs. (Public Resources Code §25402)

This bill:

1) Defines a "controlled environment horticulture space" as a building space dedicated to plant production using environmental controls, including electric lighting, irrigation, heating, cooling, or dehumidification.

2) Requires the CBSC to adopt building standards developed by the CEC in the next triennial building code requirements, to allow controlled environmental horticulture (CEH) spaces or conditioned greenhouses to use alternative technologies, such as thermal curtains, thermal screens, shade cloths, or equivalent technologies, in lieu of the requirements for double-paned glass windows.

3) Specifies that a CEH space that uses single-paned glass windows and either thermal curtains, thermal screens, shade cloths, or equivalent technologies shall be considered compliant under the California Energy Code if the CEC finds that these technologies are at least as efficient as technologies used under existing regulations.

Background

CEC's Title 24 Building Energy Efficiency Standards. Existing law establishes the CEC's authority to adopt cost-effective building and appliance standards to promote the conservation of energy and water. Title 20 of the California Code of Regulations includes the CEC's appliance standards and Title 24 includes the CEC's Building Energy Efficiency Standards. While the CEC develops the Building Energy Efficiency Standards, the CBSC is responsible for adopting all building standards, including Title 24 energy efficiency standards. Local governments are responsible for enforcing building standards through building inspections. Building energy efficiency standards are developed and adopted for a three-year period and apply at the time of construction. While some standards are mandatory, others are less proscriptive.

Bill primarily addresses energy code compliance needs for one farm but may benefit others. This bill addresses barriers that greenhouse farms may face when developing new facilities that use certain technologies that do not currently comply with existing energy code for CEH spaces. As part of the 2022 edition of the building energy efficiency standards, the CEC defined CEH spaces as the following: "…a building space dedicated to plant production by manipulating indoor environmental conditions, such as through electric lighting, irrigation, mechanical heating, mechanical cooling, or dehumidification. A CEH space does not include building space where plants are grown solely to decorate that space." This definition applies to agricultural productions that occur indoors, including in greenhouses. Among other requirements, the CEC's efficiency standards for CEH spaces specified that the building envelope of an air-conditioned CEH must be either 1) an opaque wall or roof or 2) a double-glazed window that uses air or gas as insulation between the panels. These existing requirements do not enable a greenhouse farm that uses other technologies, including single paned windows paired with thermal screens or more

advanced temperature and environmental control systems to use these alternative technologies to meet energy code requirements.

Energy code requirements are prospective and do not apply retroactively to existing facilities; as a result, some farms that pre-date the CEC's rules for CEH spaces are already operating greenhouses that do not use double-paned windows for insulation. While the CEC's energy code requirements do not impact these existing structures, they can prevent farms that use alternative technologies as part of their operations from expanding or building new facilities that also match their existing production processes.

At least one in-state agricultural producer, Windset Farms, uses alternative insulation technologies as part of its greenhouse vegetable farming. Windset Farms is based in Santa Maria, California, and operates the largest greenhouse vegetable farm in the state. Windset Farms greenhouses currently use single-paned glass with retractable thermal curtains along with environmental control systems developed by KUBO, a Netherlands-based manufacturer of advanced technology greenhouses. Windset established much of its existing agricultural production prior to the CEC's adoption of CEH energy code requirements. However, the company in the process of expanding its greenhouses to include an additional 97 acres of greenhouse space adjacent to its existing facilities. Existing CEC standards for CEH spaces would limit Windset's ability to use its existing KUBO-designed advanced greenhouses for its expansion. This bill would enable Windset to continue using its existing greenhouse technology as part of its expansion and would enable other farms to establish new greenhouses using similar alternative climate and insulation technologies.

Prior/Related Legislation

SB 48 (Becker, Chapter 378, Statutes of 2023) required the CEC, along with other agencies, to develop to a state strategy to achieve state goals for energy and greenhouse gas emissions (GHG) from existing buildings, as specified.

SB 795 (Stern, 2023) would have required the CEC to develop and implement an electronic statewide heating, ventilation and air conditioning (HVAC) equipment sales registry and compliance tracking system. It also would have required the CEC to develop an electronic statewide compliance documentation data repository for HVAC equipment and lighting controls. The bill was held by the Assembly Appropriations Committee.

SB 1477 (Stern, Chapter 378, Statutes of 2018) required the CEC to develop a statewide market transformation initiative to transform the state's market for low-emission space and water heating equipment for new and existing residential and

nonresidential buildings and to develop an incentive program to fund near-zero emission technology for new residential and commercial buildings.

AB 3232 (Friedman, Chapter 373, Statutes of 2018) required the CEC to assess the potential for the state to achieve the goal of reducing the emissions of GHGs by the state's residential and commercial building stock by at least 40% below 1990 levels by January 1, 2030.

AB 802 (Williams, Chapter 590, Statutes of 2015), among its provisions, established the energy use "benchmarking" and disclosure program at the CEC for existing buildings.

FISCAL EFFECT: Appropriation: No Fiscal Com.: Yes Local: Yes

SUPPORT:

Windset Farms (Sponsor)

OPPOSITION:

None received

ARGUMENTS IN SUPPORT: According to the author:

> AB 2200 will give food producers flexibility in meeting energy efficiency standards in ways that are tailored to local conditions and specific crop needs, helping keep costs down and produce more affordable. Current energy regulations require double-paned windows for new agricultural greenhouses to improve energy efficiency. Many greenhouse systems, however, rely on the temperate climate and extensive sunlight found in much of California. Single-paned windows with curtain systems provide the necessary sunlight into these greenhouses and give growers the ability to adjust to changing conditions for optimal crop growth and yield. AB 2200 helps support innovative greenhouses, bolster crop production, and keep more farms here in California by creating a narrow exemption for greenhouses that utilize single-paned windows.

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