Petition to the California Building Standards Commission

Regarding Building Standards in Title 24, California Code of Regulations

Instructions

1. Use this form to petition the California Building Standards Commission (CBSC) for the repeal, amendment or creation of a building standard pursuant to the repeal provisions in Title 24, Part 1, Article 3, California Administrative Code, detailed on page two of this form.
2. Attach additional sheets if necessary.
3. Mail completed form and all attachments to CBSC, 2525 Natomas Park Dr., Suite 130, Sacramento, CA, 95833-2936.

Note: This form is NOT to be used to comment on proposed building standards.

RECEIVED
2022 JUN 11 P 3: 29
CALIFORNIA BUILDING STANDARDS COMMISSION

Petitioner Information

Last Name	First Name	
Summers	David	
Representing		
ACCO Engineered Systems		
Mailing Address	City, State	Zip Code
888 East Walnut Street	Pasadena, CA	91101
Email Address		Phone Number
dsummers@accoes.com		818-244-6571

Purpose of Petition (check as appropriate)

☐ Repeal Existing Building Standard ☒ Amend Existing Building Standard ☐ Create New Building Standard

If this petition proposes the repeal or amendment of existing building standards in Title 24, identify the part number(s) and section number(s).

Part	Section	Part	Section
Part 4	Chapter 4	Part 6	120.1

Justification for Petition

1. Explain the problem and rationale for this petition. See page two Section 1-315(b).

   See attached memo

2. Explain how the problem has statewide significance. See page two Section 1-315(a).

   See attached memo

3. Is the problem giving cause for emergency action because of an imminent danger to public health, safety or welfare? See Section 1-317 on page two. ☐ Yes ☑ No If yes, explain:

   n/a

Petition History

Have you previously petitioned CBSC or another state or local agency regarding this matter?
☐ Yes ☑ No If yes, explain below and attach a copy of the previous petition(s) and a copy of all related correspondence and decisions rendered.

n/a

Attachments

If this petition has attachments, enter the number of pages attached: 6

Regulatory References

A response to your petition will be provided in accordance with the petition provisions in the California Code of Regulations (CCR), Title 24, Part 1, California Administrative Code, Chapter 1, Article 3.

To assist in completing the petition, some applicable provisions have been provided below. However, the submitting petitioner(s) should review the full text of current regulations available online at the commission's website www.dgs.ca.gov/bsc.

Section 1-313. Petitions

(a) Any local governmental agency, firm or member of the public may petition either the Commission or the authoritative agency for the proposal, adoption, amendment or repeal of any building standard or administrative regulation in Title 24 of the California Code of Regulations.

(d) The Commission may refer received petitions to the state agency, or multiple agencies, having specific jurisdiction for the subject of the adopted building standard or for the subject of the proposed building standard as proposed by the petitioner. A state agency receiving a petition referred by the Commission shall process the petition as required by this Article, including the reporting of actions and decisions by the agency to the Commission.

(e) Petitions are not to be used to address matters relating to currently proposed buildings standards. Any concerns relating to currently proposed building standards should be brought forward during the public comment period designated for the proposed building standard.

Section 1-315. Criteria for Petition A petition for the adoption, amendment or repeal of a building standard must meet the following criteria:

(a) The subject issue must have statewide significance and must have implications for a whole category of projects or a broad range of project types, and:

(b) The rationale for the petition must take the form of at least one of the following criteria:

1. A current building standard conflicts with pertinent statute(s) and/or regulation(s). To substantiate this criterion, the petitioner must cite the subject building standard and the conflicting statute(s) and/or regulation(s), and provide a clear written description of why the two are inconsistent.
2. Compliance with a current building standard is routinely impossible or onerous. To substantiate this criterion, the petitioner must cite the current building standard, present written or photographic evidence of the difficulty in complying with it, and clearly show that the problem is common or potentially common to many different projects or project types in many different circumstances. This criterion shall not be used to justify a petition for the repeal or amendment of a current building standard that poses difficulty to a single project.
3. A current building standard is inefficient or ineffective. To substantiate this criterion, the petitioner must cite the subject building standard, provide clear and concise written or photographic evidence of its ineffectiveness or inefficiency, describe a proposed alternative, and provide clear and convincing written or photographic evidence that it is more efficient or effective.
4. A current building standard is obsolete. To substantiate this criterion, the petitioner must show at least one of the following facts:
   A. A material or product specified in the building standards is not available, or
   B. There is no statute authorizing the subject building standard, or
   C. Significant developments in procedures, materials or other issues subject to the building standard have created a need for amendment or deletion of the building standard; that current state statutes permit amendment or deletion of the building standard; and that the building standard has the effect of prohibiting the use of a material or procedure that has demonstrated satisfactory performance and meets the intended purpose of building standards.
5. There is a need for a new building standard. To substantiate this criterion, the petitioner must provide a clear written description of the proposed building standard, explain why it is necessary, and cite the statute(s) that require or authorize the new building standard.

Section 1-317. Emergency Petition

(a) A petitioner may assert that the petition requires immediate action because there is imminent danger to the public health, safety or welfare. To substantiate the existence of a potential danger, the petitioner must include in the petition a written description of the specific facts showing the need for immediate action.

(b) If the emergency petition is approved by the Commission and if the petition is accepted pursuant to this article, the proposing agency or adopting agency shall develop and/or adopt new or amended building standards necessary to satisfy the cause for the petition. The new or amended building standards shall be proposed and adopted as emergency building standards as permitted by Health and Safety Code Sections 18934.8 and 18937, and as provided for in section 1-419 of this chapter.

Authority & Reference: Health and Safety Code Sections 18931, 18934.8, 18937 and 18949.6. These provisions may be accessed at the California Legislative Information website: http://leginfo.legislature.ca.gov/faces/home.xhtml.

MEMORANDUM

To: **California Building Standards Commission**

From: David Summers, P.E.
Senior Engineering Manager
ACCO Engineered Systems

Date: January 7, 2022

Re: Petition to Amend Existing Building Standard
Ventilation Calculations

RECEIVED
2022 JAN 11 P 3: 22
CALIFORNIA BUILDING STANDARDS COMMISSION

Petition Summary:

We request that Mechanical Code (Chapter 4) be revised to clarify and simplify ventilation calculations. There are three (3) related items in this request:

- Dual Calculations on a Single Project
- Residential Dwelling Units
- Simplification of Non-Residential Ventilation Calculations

Item #1: Dual Calculations on a Single Project

Description of Issue:

Mechanical Code (Chapter 4) and Energy Code (Section 120.1) contain conflicting ventilation calculation methods. Code wording is ambiguous as to which method applies to which project types. Application and enforcement is inconsistent across the state. Some jurisdictions require two sets of calculations, creating an onerous and confusing design and plan check process.

CMC 402.1 states, *"Occupiable spaces listed in Table 402.1 and Table 4-A shall be designed to have ventilation (outdoor) air for occupants in accordance with this chapter. Ventilation air requirements for occupancies regulated by the California Energy Commission are found in the California Energy Code."*

There are two possible interpretations to this section.

- Interpretation #1: Energy Code supercedes Mechanical Code, therefore the CMC ventilation requirements can be ignored for projects that are regulated by Energy Code.
    - This interpretation was the original intent when ASHRAE 62 was first adopted into CMC Chapter 4 during the 2007 code cycle. See attachment.
    - Over time, the original intent has been forgotten. The wording of the code is not clear regarding the intent.

- Interpretation #2: Projects must comply with both Mechanical Code and Energy Code ventilation requirements. This requires two sets of calculations. Comparison must be done on a room-by-room basis to determine the greater airflow value. Documentation on the plan check drawings is onerous and complicated.

    - This is the interpretation currently being used by some local jurisdictions, as shown in the plan check comments below from sample projects. *(Note: this is not an issue for just one project, but for every project in these jurisdictions and possibly others).*

      City of Los Angeles sample comment:

4	Clearly show outside supply air calculations per the Los Angeles Mechanical Code and Title 24 for every occupiable room on each floor and comply with the more restrictive	LAMC 403.1; Title 24 Part 6 120.1(b)2

City of Irvine sample comment:

[Sheet MO.02 | Comment 00010 | MEC_IRVINE CITY HALL GYM HVAC DRAWINGS.pdf]
Ramin Afshar

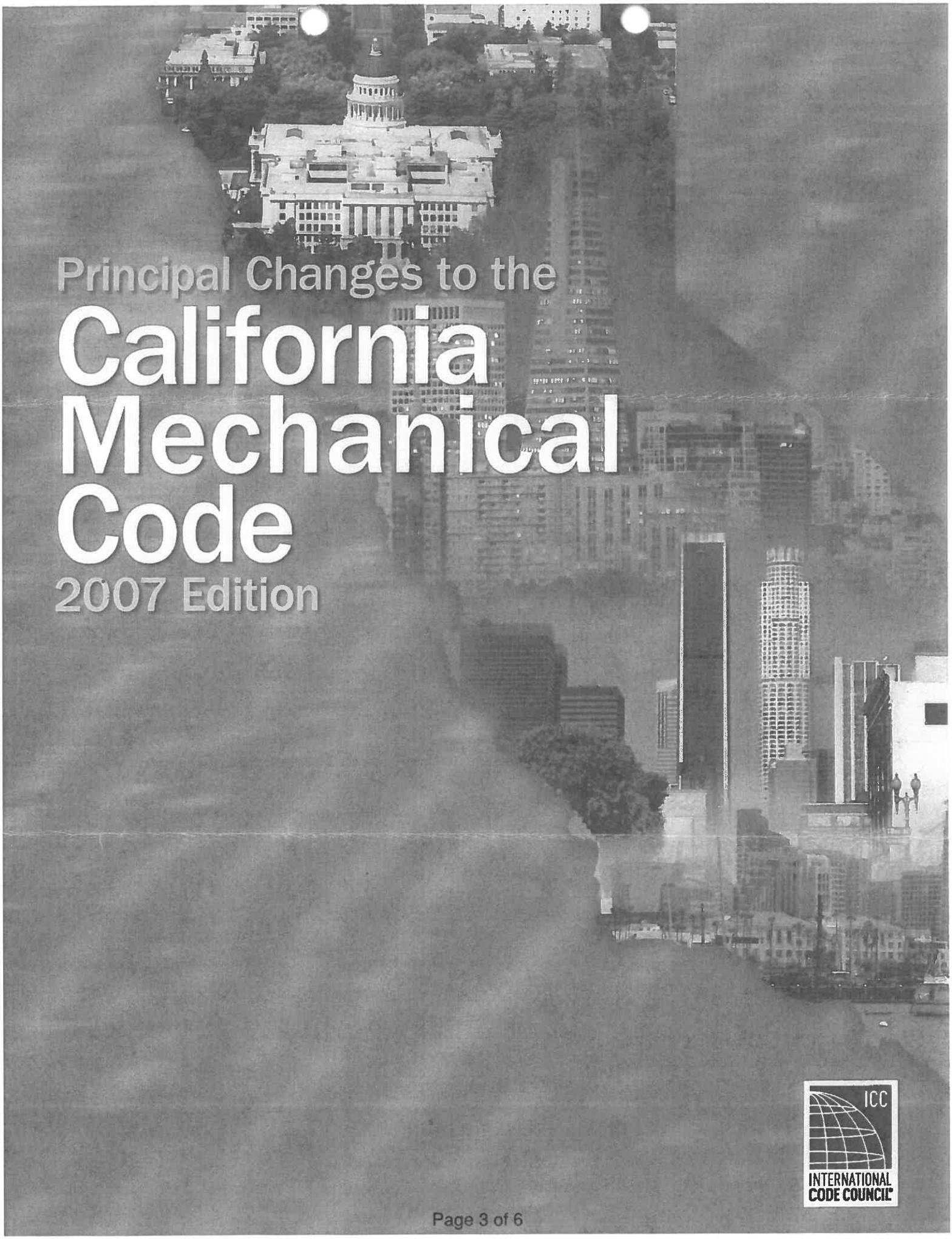
Provide ventilation rate in accordance with Section 120.1 of the 2019 California Building Energy Efficiency Standards or CMC 402.0, whichever is greater.

Petition Request:

We request that CMC 402.1 be revised to clarify which ventilation calculation method should be used for which project.

We suggest the following text as an example of wording that is more clear:

> "**402.1 Occupiable Spaces.** Occupiable spaces listed in Table 402.1 ***[OSHPD 1, 1R, 2, 3, 4 & 5]*** *and Table 4-A* shall be designed to have ventilation (outdoor) air for occupants in accordance with this chapter.
> ***Exception: [Not permitted for OSHPD 1, 1R, 2, 3, 4 & 5]*** *Occupancies regulated by the California Energy Commission shall comply with ventilation requirements in the California Energy Code and shall not be required to comply with this chapter."*



Principal Changes to the

California Mechanical Code

2007 Edition

ICC
INTERNATIONAL CODE COUNCIL®

CHAPTER 4
VENTILATION AIR SUPPLY

Section: Chapter 4 Ventilation Air Supply

Change Type: Addition/Modification

Code Type: (CMC)

Change Summary: An amendment has been made to Chapter 4 in the 2007 CMC that requires ventilation rates to be enforced from the *California Energy Code* (CEC).

Analysis: The 2006 code cycle has adopted ASHRAE 62 in Chapter 4 for ventilation air requirements. In Section 402.1 and Table 4-1 there is a note in the 2007 CMC stating that ventilation air-supply requirements for occupancies regulated by the California Energy Commission are found in the CEC. The intention of this statement is to not adopt the ventilation rates in Chapter 4 in the 2007 CMC and to use the ventilation rates in Section 121 in the 2005 CEC. This only applies to an occupancy that is regulated by the CEC. If an occupancy is not regulated by the CEC, Chapter 4 in the CMC is to be used.

Item #2: Residential Dwelling Units

Description of Issue:

For Residential Dwelling Units, there are two different formulas for ventilation airflow:

[0.03 x Area] + [7.5 x (Bedrooms + 1)]	Energy Code 120.1(b)(2)(A)(iv)(a)
[0.06 x Area] + [5 x (Bedrooms + 1)]	CMC 403.2.1 & Table 402.1

Energy Code follows ASHRAE 62.2, which covers all residential buildings, including high-rise residential.

CMC follows an obsolete version of ASHRAE 62.1-2019, which was current at the time 2019 code was published. Addendum g to 62.1-2019 (September 2021) removed this item, since 62.2 now covers all residential buildings.

Addendum g to Standard 62.1-2019

Revise Table 6-1 as shown. The remainder of Table 6-1 is unchanged.

Table 6-1 Minimum Ventilation Rates in Breathing Zone

Occupancy Category	People Outdoor Air Rate R_p		Area Outdoor Air Rate R_a		Default Values Occupant Density	Air Class	OS (6.2.6.1.4)
	cfm/ person	L/s· person	cfm/ft^2	L/s·m^2	#/1000 ft^2 or #/100 m^2		
[. . .]							
~~Transient~~ Residential							
Common corridors	—	—	0.06	0.3		1	✓
~~Dwelling unit~~	~~5~~	~~2.5~~	~~0.06~~	~~0.3~~	~~F~~	~~1~~	~~✓~~

Petition Request:

We request that CMC Table 402.1 be revised with updated values for Residential Dwelling Units, to be consistent with Energy Code and ASHRAE 62.2. Specifically:

- R_p = 7.5
- R_a = 0.03

Item #3: Simplification of Non-Residential Ventilation Calculations

Description of Issue:

Mechanical Code (Chapter 4) and Energy Code (Section 120.1) contain conflicting ventilation calculation methods for non-residential buildings.

- Mechanical Code generally follows ASHRAE 62.1 ventilation calculation methods.
- Energy Code follows a simpler method that has been in use for many years in California (with some revisions over the years).

Engineers practicing in the state must learn both calculation methods. Engineering firms must develop and maintain separate calculation spreadsheets and tools for the different methods. These are onerous requirements on engineers and engineering firms.

It does not make sense that two similar building types under different codes (e.g. a historical building that is exempt from energy code versus a non-historical building) would have different ventilation requirements from the State.

In our experience, the Energy Code ventilation calculations are most familiar to engineers and plan check authorities. Systems using these calculations can be reliably designed and checked. These calculations are also coordinated with other Energy Code requirements, such as demand control ventilation minimums.

Petition Request:

We request that CMC Chapter 4 be revised to remove all references to ASHRAE 62.1, and instead refer to the ventilation calculation methodology found in Energy Code.

END OF MEMO

DEPARTMENT OF GENERAL SERVICES CALIFORNIA GOVERNOR GAVIN NEWSOM
BUILDING STANDARDS COMMISSION
2525 Natomas Park Drive, Suite 130
Sacramento, California 95833-2936
(916) 263-0916 FAX (916) 263-0959

January 27, 2022

ACCO Engineered Systems via Email
Mr. David Summers
888 East Walnut Street
Pasadena CA 91101

RE: Petition 01-22

Dear Mr. Summers:

This letter is to acknowledge receipt of your petition and to advise you of our determination. Petitions regarding building standards received by the California Building Standards Commission, and our review, are governed by Article 3 within Chapter 1 of the California Administrative Code, Part 1 of Title 24, California Code of Regulations.

Your petition requests that the California Mechanical Code, Chapter 4, and California Energy Code, Section 120.1, be revised to clarify and simplify ventilation calculations. Our determination is that while your petition satisfies the requirements for a petition, the subject matter is within the jurisdiction of the California Energy Commission (CEC) and not the Building Standards Commission. Accordingly, we have referred your petition to CEC for their review and determination.

The CEC may have other regulatory criteria applicable to petitions that are different from this commission. You should receive written notification of their determination in approximately 45 days from their receipt of the petition referral.

If you have any questions or need any further information, or if you believe our determination is in error, you may contact me at (916) 263-0916.

Sincerely,

Michael Nearman, Deputy Executive Director
California Building Standards Commission

Enclosure: Copy of referral letter

cc: CBSC Chron

DEPARTMENT OF GENERAL SERVICES CALIFORNIA GOVERNOR GAVIN NEWSOM
BUILDING STANDARDS COMMISSION
2525 Natomas Park Drive, Suite 130
Sacramento, California 95833-2936
(916) 263-0916 FAX (916) 263-0959

January 27, 2022

California Energy Commission via Email
Mr. Peter Strait
715 P Street
Sacramento CA 95814

Peter.Strait@energy.ca.gov

Re: Referral of Petition P-01-22

Dear Peter:

Enclosed for your agency's handling is a petition received by the commission from David Summers at ACCO Engineered Systems requesting an action to amend building standards in Part 4 and Part 6 of Title 24, California Code of Regulations. Our determination is that the subject matter is within the jurisdiction of the California Energy Commission (CEC).

Please refer to Government Code Sections 11340.6, 11340.7 and 11347.3, and the petition regulations in Article 3 of Chapter 1, Part 1, Title 24, California Code of Regulations, beginning with Section 1-313, and make a determination as to the appropriate action.

Enclosed is a copy of the petition and our letter to the petitioner advising of this referral to CEC. The commission will continue to track this petition. According to Sections 1-319 and 1-321, please advise this office of your determination and planned action within 45 days of the date of this letter.

If you have any questions or need any further information, please contact me at (916) 263-0916.

Sincerely,

Michael Nearman, Deputy Executive Director
California Building Standards Commission

Enclosures: Petition and supporting documents
Letter to petitioner

cc: CBSC Chron

RESOLUTION NO: 22-0309-XX

STATE OF CALIFORNIA

STATE ENERGY RESOURCES
CONSERVATION AND DEVELOPMENT COMMISSION

RESOLUTION DENYING PETITION FROM ACCO ENGINEERED SYSTEMS PURSUANT TO SECTION 1-323(d) OF CHAPTER 1, PART 1, TITLE 24 OF THE CALIFORNIA CODE OF REGULATIONS

WHEREAS, ACCO Engineered Systems (ACCO) submitted a petition under Section 1-313(a) of Chapter 1, Part 1, Title 24 of the California Code of Regulations, to the California Building Standards Commission; and,

WHEREAS, the California Building Standards Commission determined that the petition requested an energy-related amendment and forwarded the petition to the California Energy Commission (Energy Commission) as the agency with sole adoption authority for building energy standards; and,

WHEREAS, ACCO's petition concerns the potential overlap between requirements of the California Mechanical Code and the California Energy Code and potential confusion caused by the potential overlap; and,

WHEREAS, pursuant to Section 1-323(d) of the California Administrative Code, a petition may be denied for cause if the issues cited by the petitioner have been raised and answered during a previous rulemaking; and,

WHEREAS, the issues raised in ACCO's petition were also raised by commenters and by Energy Commission staff as part of the 2022 triennial update to the California Building Code; and,

WHEREAS, in response to those issues, the California Mechanical Code, specifically section 402.1 of the California Building Code, was amended in the 2022 triennial update to clarify that ventilation air requirements for occupancies regulated by the Energy Commission are found in the California Energy Code and supersede those of the California Mechanical Code (the amendment). Specifically, the express language of section 402.1 was amended as follows with new language <u>underlined</u> and deleted language ~~stricken out~~:

> **402.1 Occupiable Spaces.** Occupiable Spaces […] shall be designed to have ventilation (outdoor) air for occupants in accordance with this chapter. *Ventilation air requirements for occupancies regulated by the*

California Energy Commission ~~are~~ and found in the California Energy Code supersede those of the California Mechanical Code.

THEREFORE BE IT RESOLVED, that the petition is denied pursuant to Section 1-323(d) of the California Administrative Code, on the grounds that the issues cited by the petitioner have been raised and answered during a previous rulemaking; and,

THEREFORE BE IT FURTHER RESOLVED, that staff is directed to inform the California Building Standards Commission and the petitioner of the denial of the petition and to work with the petitioner to explain that the amendment addresses the issues the petitioner raised; and,

THEREFORE BE IT FURTHER RESOLVED that the Energy Commission directs the Executive Director or their designee to take all actions necessary to implement this Resolution.

CERTIFICATION

The undersigned Secretariat to the Energy Commission does hereby certify that the foregoing is a full, true, and correct copy of a Resolution duly and regularly adopted at a meeting of the California Energy Commission held on March 9, 2022

AYE:
NAY:
ABSENT:
ABSTAIN:

Liza Lopez
Secretariat