HOSPITAL BUILDING SAFETY BOARD
Energy Conservation and Management Committee

Wednesday, July 19, 2017
10:00 a.m. - 4:00 p.m.

Office of Statewide Health Planning and Development
2020 West El Camino Avenue, Ste. 9-117
Sacramento, CA 95833
and
Metropolitan Water District Headquarters
700 N. Alameda Street, Suite 2-546
Los Angeles, CA 90012

Committee Members Present:
Eric Johnson, Chair
David Bliss, Vice Chair
Louise Belair
Deepak Dandekar
Enid Eck
Pete Kreuser
Carl Scheuerman

Consulting Members
David Lockhart
Walt Vernon

HBSB Staff:
Ken Yu, Executive Director
Joanne Jolls
Evett Torres

California Energy Commission Staff:
Dave Ashuckian
Peter Strait
Gabriel Taylor

Board Members Present
Mike Hooper
Bruce Macpherson

OSHPD Representatives & Staff
Robert P. David, OSHPD Director
Paul Coleman, FDD Deputy Director
Chris Tokas
Elizabeth Wied, OSHPD Legal Council
Chris Dickey
Glenn Gall
Roy Lobo, Ph.D.
Dave Mason
Tim Mort
Ramin Sadr
Diana Scaturro
Nanci Timmins
1. Welcome and Introductions

Presenter: Eric Johnson

Eric Johnson, Energy Conservation and Management Committee Chair, called the meeting to order. The committee members, Board members, consulting members, OSHPD staff, and interested parties introduced themselves in Sacramento and Los Angeles. Executive Director Yu announced that a quorum was present.

2. Review the May 11, 2017 Energy Conservation and Management Committee and Administrative Processes, Code Changes, and Standard Details Committee joint meeting report/minutes

Presenter: Eric Johnson

Mr. Johnson noted that the meeting report was approved at the June 28, 2017 full Board meeting.

3. Presentation and Discussion: The California Energy Commission (CEC) will present the draft energy standards for Institutional Group “I” Occupancy buildings developed to date

• Review comments and feedback from the joint Committee meeting on May 11, 2017, and the CEC Public Workshop on July 13, 2017
• Review current phase of current code adoption cycle timeline
• Discuss next steps for OSHPD and CEC

Presenter: Gabriel D. Taylor, P.E., California Energy Commission

Mr. Taylor gave a presentation on the CEC draft 2019 Title 24, Part 6, Energy Standards Proposal for Licensed Healthcare Facilities (draft date June 29, 2017):

Overview and Goals
• The proposed energy standards will apply to all Institutional Group I occupancy healthcare facilities, except for Group I-3 occupancy facilities
• Exceptions in the proposal are for Institutional Group I-3 occupancy healthcare facilities

Basis and Design of Code:
• Efficiency and cost-effectiveness—not conservation
• Technical feasibility—measures are well-established in industry, used for many years, proven cost-effective and available from multiple manufacturers
• CEC approach to code is owner/operator centric
• Flexible—sections in proposal with “either/or”, allows detailed analysis when there is disagreement with code requirement

Draft code proposal is based on, and is proposing changes to, the 2016 Building Energy...
Efficiency Standards

Six (6) sections (and their exceptions) of the draft Title 24, Part 6 proposal:

1. Scope and Definitions (§100)
   - Specify which Occupancy Groups are governed by the Energy Code
     - Add Occupancy Group I
     - Exclude I-1, 1-3, and 1-4 Occupancy Groups
   - Add a definition of healthcare facilities

2. Systems and Equipment (§110)
   - Specifies the efficiency of large equipment that can be installed in facilities in California
   - Requirement placed mostly on manufacturers, not owners
   - Exceptions:
     - Water Heating (will reference Plumbing Code instead of Energy Code)
     - Solar Ready Buildings for Healthcare

3. Design and Installation (§120)
   - Exceptions:
     - HVAC- Dead Band; Shutoff and Resets; Demand Shed
     - Covered Processes- Compressed Air Systems

4. Lighting and Electrical (§130)
   - Aim is to reduce power, not light
   - Exceptions:
     - On/Off switches in psychiatric and secure areas
     - Auto shut-off in patient areas
     - Outdoor lit signs

5. Performance and Prescriptive (§140)
   - Flexibility—Three step process to calculate base-line energy consumption of a design
     - Calculate energy budget for the facility being designed
     - Calculate energy use of proposed trade-offs
     - Compare and iterate

6. Additions and Alterations (§150)
   - All exceptions in the previous sections apply

Discussion and Public Input

Committee Comments:

Mr. Gall asked why Group I-3 occupancy healthcare facilities are specifically excluded in the draft proposal. He explained that the proposal should focus on the classification of facility type, Group I occupancy healthcare facilities, instead of on exiting provisions—as in Group I-2 occupancy—as permitted under the mandate. He argued that focusing on current occupancy designation with divisions, excludes an entire group of healthcare facilities that should be
The committee decided to table the discussion until the next meeting.

**Ms. Eck** noted that the California Department of Public Health (CDPH) has issued guidelines related to faucet design and recommended that Title 22, CDPH and other requirement/guidelines be considered to avoid making hospitals non-compliant with those requirements in order to meet those being proposed. She also asked about provisions for medical compressed air, which is used to dry instruments in the sterile processing.

**Mr. Taylor** explained that CEC’s subject-matter experts would review the matter.

**Mr. Coleman** noted that plumbing efficiency standards can be very problematic, especially water-flow restrictions on fixtures, which would likely be too restrictive for healthcare.

**Mr. Taylor** said that he anticipated looking at what efficiency standards for fixtures would be acceptable in healthcare environments in future code cycles.

**Mr. Strait** clarified that the only thing specified in the proposal related to fixtures is that federal and state requirements must be met. He also offered to add additional language if needed.

**Mr. Johnson** had a question about additions and alterations, he stated that if a percentage of an existing building is affected during a remodel, it typically triggers having to make more upgrades than planned.

**Mr. Strait** explained that “triggers” are in the administrative sections of the proposal, but they are based on cost-effectiveness, and that although the alterations language says it first applies specifically to altered components, it will not expand the scope of the original project. Equipment requirements would apply if you are replacing the equipment, not repairing or improving the existing equipment.

**Mr. Kreuser** asked if there is a process or guideline for determining if the requirement is cost-prohibitive.

**Mr. Taylor** explained that CEC’s analysis calculates cost-effectiveness by comparing the upfront and increased cost of installation with the potential energy savings over the reasonable life span of the component; often, the energy savings is sufficient to deem it cost-effective.

**Mr. Scheuerman** asked for clarification of Part 1, Chapter 10, Section 108 regarding exemptions and the process for exemptions.

**Mr. Strait** explained that there is a process for site-specific determinations but it is part of the administrative code; they are not part of Part 6 requirements. Although there is a process to apply for exceptions in Part 1, those exceptions are tightly bordered so if there is a cost-prohibitive situation, he recommends that you talk to their staff.
Cost-effective analysis, they consider the marginal cost of improving that component's efficiency.

Mr. Taylor added that the proposed code has some flexibility for unexpected circumstances and for performance trade-offs. If a developer proposes an alternate path forward that is provably equivalent to the code, there is a process for considering/approving it.

Pre-Rulemaking Schedule

This is a three-year code cycle and this is for 2019. Between July and October 2017, CEC will collect comments from stakeholders and collaborate with OSHPD. The formal Rulemaking process will begin in November when the draft Express Terms will be published and the 45-day public review and comment period begins. The CEC will be giving workshops to address changes in the current draft in November and December. The 45-day public review period will end in January 2018. Comments collected during the public review period will be used in revising the draft Express Terms to be issued in February 2018 for a 15-day public review. Ideally, the draft Express Terms language will be adopted by the Energy Commission in May and approved by the Building Standards Commission in December 2018.

The Energy Commission’s goal is to create owner/operator centric code that provides patient health and safety as cost-effectively as possible. If there is anything in this proposal that anyone feels will harm health and safety, bring it to my attention.

Mr. Vernon suggested that a topic for future discussion is the concern among building designers that the real cost that will be incurred by healthcare facilities may be compliance and the need to document compliance and have it reviewed.

Mr. Straight explained that the Energy Commission’s software development team is working to automate the data collection reporting forms, for lighting, mechanical, and plumbing systems, to make it easier to document and to review data.

Mr. Scheuerman asked about the application requirements in Title 24, Part 1, Chapter 10, which states that “Building permits subject to Part 6 shall contain one copy of three named documents;” since permit applications are submitted to OSHPD is the CEC set up to deal with the flow of new documents coming from OSHPD? What impact on the plan review process will this body of new documents have that has not yet been addressed?

Mr. Gabriel stated that as soon as the requirements have been defined, the top priority will be to offer staff and services to OSHPD to integrate the requirements into their process as seamlessly as possible. Part of the reason for the phased approach is to keep the requirements in this cycle known. There are no new requirements, all forms and documents already exist.

Mr. Scheuerman suggested this may be a topic for the Administrative Processes, Code Changes, and Standard Details Committee, to ensure that new requirements are integrated in a manner that facilitates the process.
Mr. Scheuerman asked if there were additional administrative steps at the completion of the commissioning that might hinder the facility’s ability to start providing services.

Mr. Strait stated that the proposed code changes do not impose any new plan review requirements. He also explained that the required forms, Design, Build, and Test, takes some of the information that is already provided in the plans and elevates it to make it easy to see.

- Design phase: Makes it easy to confirm that an installed equipment/system meets the federal efficiency standards
- Build phase: Installer confirms that they installed that equipment
- Test phase: Technician confirms equipment was tested and that it works.

There is a small additional step for testing but the documents records information that already exist.

Mr. Scheuerman asked, “What will the next phase entail for the 2022 cycle?”

Mr. Taylor stated that the next phase will be proposals specific to healthcare facilities. Any sections exempted in this proposal, that should be applied to licensed healthcare facilities but need additional analysis for cost effectiveness or impact on health and safety, will be in the next phase.

4. Discuss and Decide: For its next meeting, the Committee proposes visiting the UC Davis California Lighting Technology Center for a hands-on demonstration of new lighting technologies and controls and their impact on patient

Presenter: Eric Johnson

Discussion and Public Input

Mr. Johnson originally planned to discuss possibly having the Committee visit the California Lighting Technology Center, UC Davis for its next meeting. Because of the limited time available to work on the CEC’s proposed code changes, the Committee agreed to table the discussion for another couple of meetings.

Mr. Coleman suggested the Committee have one more meeting before November to sit down and go over the proposed regulations, one a time, in detail. He also stated that he didn’t think individual stakeholders had gotten together as a group and discussed how these proposed changes impact other stakeholders and that more input is greatly needed.

Mr. Johnson commented that it would be very beneficial to have OSHPD staff participate at the next meeting and address the steps that FDD will need to take from a review and enforcement perspective.
5. Comments from the Public/Board Members on issues not on this agenda

The board will receive comments from the Public/Board Members. Matters raised at this time may be taken under consideration for placement on a subsequent agenda.

**Presenter:** Eric Johnson

**Dr. Bliss** expressed that he was unsure if this was the correct committee or forum but that he was very recently made aware of a Los Angeles area hospital that recently experienced substantial downtime due to a problem with the Los Angeles Department of Water and Power. One reason for the long downtime was because the chillers were not on a Life/Safety branch or Critical branch of power and he explained that when chillers go down, there’s less cooling in the building, the next thing to go down is the CT scan and the MRI because they don’t have sufficient autonomous cooling, effectively having to shut down trauma. An 18-hour outage is not amenable to an uninterrupted power supply solution and a significant increase in temperature is predicted over the next five to ten years, and consequently, a substantial change to utility function and supply, which will impact hospitals in Southern California.

**Mr. Taylor** commented that utilities are looking more at demand-site management as a solution to integrating large amounts of excess renewable energy. Healthcare facilities are exempted from many demand-site requirements in this code cycle, but a facility with robust microgrid improves reliability of health care systems.

**Dr. Bliss** commented that people tend to associate demand-site management with load-drop so the better term would be Distributed Energy Resources, or DER, which can be a spinning reserve of energy for the hospital, with functions like ancillary services and power quality regulation to make healthcare facilities resilient.

6. Adjournment

Mr. Johnson adjourned the meeting at 11:34 am