

**DOCKETED**

<b>Docket Number:</b>	21-BSTD-01
<b>Project Title:</b>	2022 Energy Code Update Rulemaking
<b>TN #:</b>	238865
<b>Document Title:</b>	Transcript of May 28, 2021 for Lead Commissioner Hearing
<b>Description:</b>	N/A
<b>Filer:</b>	Amber Beck
<b>Organization:</b>	California Energy Commission
<b>Submitter Role:</b>	Commission Staff
<b>Submission Date:</b>	7/14/2021 4:07:21 PM
<b>Docketed Date:</b>	7/14/2021

BEFORE THE  
CALIFORNIA ENERGY COMMISSION

In the matter of, )  
 ) Docket No. 21-BSTD-01  
2022 Building Energy Efficiency )  
Standards (2020 Energy Code) )

LEAD COMMISSIONER HEARING  
2022 BUILDING ENERGY EFFICIENCY STANDARDS  
(2022 ENERGY CODE)

**REMOTE ACCESS ONLY**

WARREN-ALQUIST STATE ENERGY BUILDING  
1516 NINTH STREET  
1ST FLOOR, ARTHUR ROSENFELD HEARING ROOM  
SACRAMENTO, CALIFORNIA 95814

FRIDAY, May 28, 2021

9:04 A.M.

Reported By:  
Peter Petty

## APPEARANCES

Commissioner

Andrew McAllister, Lead Commissioner

Staff Present

Payam Bozorgchami  
Haile Bucaneg  
Ronald Bulneg  
Joe Loyer  
Cheng Moua  
James Qaqundah  
Michael Shewmaker  
Peter Strait  
Danny Tam  
Lorraine White  
RJ Wichert  
Daniel Wong

**Also Present**Public Comment

Laura Petrillo-Groh, Air Conditioning Heating and  
Refrigeration Institute (AHRI)  
Michale Scalzo, NLCAA  
Shelby Gatlin, CalcERTS  
Gina Rodda, Gabel Energy  
Bob Raymer, CBIA  
Nehemiah Stone, Stone Energy Associates

## INDEX

	Page
Introduction - Commissioner McAllister	4
General Structure of Workshop - Payam Bozorgchami	9
Subchapter 1, All Occupancies - General Provisions Payam Bozorgchami	17
Subchapter 2, All Occupancies - Mandatory Requirements for the Manufacture, Construction and Installations of Systems, Equipment and Building Components - Payam Bozorgchami	18
Title 24, Part 1, Administrative Regulations (Excluding Section 10-115) - Haile Bucaneg	25
Joint Appendix (JA) - Michael Shewmaker, Danny Tam	36
Residential Appendix (RA) - Cheng Moua	50
Nonresidential Appendix (NA) - Haile Bucaneg, Daniel Wong	58
Alternative Calculation Method (ACM) Approval Manual RJ Wichert	67
Reference Appendices, Joint Appendices JA7 Joe Loyer	72
Public Comments	86
Adjournment	95
Reporter's Certificate	96
Transcriber's Certificate	97

## P R O C E E D I N G S

1  
2 MAY 28, 2021

9:04 A.M.

3 MR. BOZORGCHAMI: Hello everyone. My name is  
4 Payam Bozorgchami, Project Manager of the 2022 Building  
5 Energy Efficiency Standards. I want to welcome you to  
6 Energy Commission's virtual Lead Commissioner hearings  
7 for the upcoming California Energy Codes.

8 The Lead Commissioner overseeing the work that  
9 is being done for the 2022 Energy Codes is Commissioner  
10 Andrew McAllister.

11 This hearing is the third and last hearings that  
12 are going to be held on the 45-day express terms, where  
13 we would like to receive your comments regarding the  
14 proposed language for Parts 1 and Part 6 of Title 24.

15 In these hearings we will not be discussing the  
16 environmental impact report. Later on in my  
17 presentation I will provide you a slide with the docket  
18 number, which is totally different than what we have for  
19 Part 1 and Part 6, and the link, and a timeline  
20 associated to that document.

21 We will be muting everyone. And after each  
22 proposed subchapter is presented, you can either raise  
23 your hand and we will unmute you or you can submit your  
24 questions in the question and answer window, and we will  
25 have a group of panelists who will try to answer your

1 questions as they come in.

2           Also, if you are participating by phone, you can  
3 use \*9 to raise your hand and \*6 to mute and unmute  
4 yourself. One important thing to remember is that when  
5 we do unmute you, you also need to unmute yourself on  
6 your side.

7           And please, state your name and your  
8 affiliation.

9           This workshop is being recorded and it will be  
10 transcribed. And by stating your name and affiliation,  
11 we can figure out who we need to reach out for further  
12 discussion, if needed.

13           Also, we are going to implement a three-minute  
14 rule today. And we are asking for one speaker per  
15 organization to provide comments.

16           In today's hearing, if we notice that we're  
17 getting an abundance of commenters commenting, we may  
18 shorten that three minutes down to maybe two minutes, or  
19 even one minute. We just want to make sure that  
20 everybody has an opportunity to provide comments to us  
21 today.

22           And also, if you do not want to submit a verbal  
23 comment to us today, you can also submit your comments  
24 by docketing it to our docket. And I'll provide that  
25 information to you in a later slide. But we need your

1 comments for today's hearing sooner, within the week or  
2 two from today that will be the best.

3 With that, before we start Commissioner, would  
4 you like to give a few words.

5 COMMISSIONER MCALLISTER: Absolutely. Thank  
6 you, Payam. And thanks everyone for being here today,  
7 our third day of reviewing the Part 6 and Part 1  
8 regulation update, or the California Energy Efficiency  
9 Building Standards -- or Building Energy Efficiency  
10 Standards.

11 And I think it's been a productive week and I  
12 think those of you have been previous days, basically  
13 today will be the same process.

14 Again, I just want to emphasize that  
15 participation is absolutely welcomed and, in fact, it's  
16 essential to dialing in the proposal that you all have  
17 in front of you. And to the extent you have expertise  
18 and you have feedback on any particulars of this  
19 proposal, then we really -- we have to hear that, we  
20 want to hear that and it will make the whole package  
21 better.

22 So, as Payam said, sooner is better than later.  
23 If there's any iteration required or any sort of  
24 clarification required, then that would give us time to  
25 work through it so that everyone's clear on any changes

1 that do take place within the 45-day period, in  
2 preparation for the 15-day. And the further we get down  
3 that path, the more difficult it is to kind of dial  
4 things in properly. So, that is good.

5           Again, this is about the regulations themselves,  
6 it's not about the environmental impact report. That is  
7 a separate proceeding. So, we'd definitely encourage  
8 everyone to get involved as they see fit in that  
9 proceeding. Also very important for moving this whole  
10 enterprise forward.

11           I want to just thank all the stakeholders that  
12 were with us and commented, in particular that commented  
13 on Monday and Thursday of this week. And today we're  
14 getting towards the light at the end of the tunnel on  
15 the hearings as we go over the rest of Part 6, and then  
16 the bits and pieces of Part 1, and the administrative  
17 regulations. And then, sort of going into the joint  
18 appendices, the reference appendices, including the  
19 joints, and the residential, and the nonresidential, and  
20 then finishing up with the ACM, alternative calculation  
21 method process and manual.

22           So, we're finishing up the little, the final  
23 bits and pieces today. All of this is really important  
24 and we absolutely invite you to not only comment today,  
25 but also submit written comments in the docket. Again,



1 sooner is better.

2           So, we've done pretty well. The last two days I  
3 think we've had plenty of time and we've been able to,  
4 you know, get through the morning and even, you know,  
5 into the afternoon and finish early. But we've set  
6 aside all three days, you know, time for any comment  
7 that is needed, even extensive public comment.

8           And so, if it looks like, you know, three  
9 minutes we'll start out at. We really haven't had to  
10 shorten that since the first day, when we thought we'd  
11 have a lot of comments and we did have a fair amount the  
12 first day. But we want to just make sure everyone has a  
13 chance to speak, if they're so inclined, and absolutely  
14 encourage you to submit written comments.

15           So, anyway, sorry to beat the horse here, but I  
16 just, I really want to emphasize that the process is the  
17 lifeblood of this whole -- you know, input is the  
18 lifeblood of this whole process. And, you know, the  
19 Building Code is a pretty complex thing and so we just  
20 want to make sure that all the details are as good as  
21 they can be going forward.

22           So, thanks again everyone for your  
23 participation. Thank you to Payam and staff across the  
24 board for all the effort and the diligence that's gone  
25 into what we have in front of us. This really has

1 involved dozens and dozens of staff in the Commission,  
2 and even more stakeholders than that. So, really, it  
3 does take this group effort to make it implementable and  
4 the best thing for California, which is the ultimate  
5 goal. So, thanks to everyone again.

6 I'll pass it back to you, Payam.

7 COMMISSIONER MCALLISTER: Payam, I think you  
8 might be muted.

9 MR. BOZORGCHAMI: Happens every time, I  
10 apologize. As Commissioner McAllister just presented,  
11 we will start today with a quick history of the Energy  
12 Codes, then we'll go into Subchapters 1 and Subchapters  
13 2. It's just general provisions and mandatory for all  
14 occupancy types.

15 And then, we will discuss the Part 1, Subchapter  
16 10 of the Administration Regulations of Title 24, with  
17 an exception of the community solar. We did the  
18 community solar presentations and discussions on our  
19 first day of the three-day hearings, and that was on  
20 Monday, May 24th.

21 We may be -- I'm trying to not be the barrier  
22 between you and the three-day weekend that's coming  
23 here, starting this afternoon for some of us. So, we  
24 may be able to push some of the reference appendices  
25 discussions, Joint Appendix before lunch. But we do

1 have a hard stop today at 11:45 and we will reconvene at  
2 1:15 again. Commissioner McAllister has another  
3 appointment that he has to attend to and he will do  
4 that, and then we could restart after a longer lunch  
5 break today than we did in the past two hearings.

6 And then, we'll just jump into the Residential  
7 Appendix, Nonresidential Appendix, and the ACM Approval  
8 Manual.

9 Hopefully, today will be a shorter day than it  
10 has been for us, but we have to go through these  
11 subchapters and appendices.

12 So, with that let me just start real quick, with  
13 a quick history of how this all started. Two California  
14 Assemblymen Charles Warren and Al Alquist coauthored  
15 what is known today as the Warren-Alquist Act. This Act  
16 gives authority to the Energy Commission to develop the  
17 Energy Code on a triennial basis, and local  
18 jurisdictions to enforce the Energy Code through a  
19 building permit process.

20 The Energy Code is developed to reduce the  
21 wasteful, uneconomic, inefficient and unnecessary  
22 consumption of energy. This Act was signed into law in  
23 1974 by Governor Ronald Reagan. And the Energy  
24 Commission was launched under Governor Jerry Brown in  
25 1975, with the appointment of the first five

1 Commissioners.

2           And the Commission immediately set out to meet  
3 the extensive mandates of the Warren-Alquist Act,  
4 including the adoption of the first Building Efficiency  
5 Standards that went into effect in 1978.

6           There has been recently other goals that have  
7 been bestowed on us here at the Energy Commission.  
8 Through the Energy Codes we need to consider reduction  
9 of the greenhouse gases.

10           So, how do we do that? There has been -- we  
11 have a separate team of folks here at the Energy  
12 Commission that have been looking at pathways for  
13 electric, to all-electric buildings, bringing in demand  
14 flexibility and self-utilization of PV and generations.  
15 And trying to reduce the residential building impacts on  
16 the electricity grid, and that's been led by Mazi  
17 Shirakh here at the Energy Commission.

18           As you know, I have to bring this slide up every  
19 so often, and the reason is I'm getting a lot of calls  
20 and questions regarding the climate zones, and a lot of  
21 people are confusing the IECC climatic zones with what  
22 we have here in California.

23           California is divided into 16 climate zones  
24 based on the heating degree days and cooling degree  
25 days. Where in IECC I believe California is divided

1 into only four climate zones. IECC has California,  
2 Death Valley and Sacramento in the same climatic zone,  
3 Climate Zone 3, which really does not make sense for us  
4 here.

5 So, what we did, we separated out California  
6 into, like I said, 16 climate zones and microclimates  
7 based on the cooling and heating degree days.

8 Staff, with the help of our consultants and our  
9 utility partners, being Pacific Gas & Electric, Southern  
10 California Edison, San Diego Gas & Electric, Sacramento  
11 Municipal Utility District and Los Angeles Department of  
12 Water & Power who, with their consultants help support  
13 our work for the 2022.

14 For this code cycle, there was 25 workshops  
15 sponsored by our utility partners and where they  
16 brainstormed, they provided ideas, and they wanted  
17 feedback from public for them to develop the Codes and  
18 Standards Enhancement Team, the CASE reports is what we  
19 call them here. And they were submitted to the Energy  
20 Commission.

21 The Energy Commission staff took those into  
22 consideration. And from those we had 18 staff workshops  
23 here at the Energy Commission to propose the final  
24 measures that the Energy Commission thought it would be  
25 worth going forward for in 2022.

1           Energy Commission also did receive proposals to  
2 be considered for the 2022 Energy Codes from other  
3 entities. The two entities were California Energy  
4 Alliance, and also a company named Vertiv.

5           With all that was happening, there was a lot of  
6 communications, a lot of interactions going with us here  
7 at the Energy Commission, with the Utility CASE Team,  
8 and with public members. So, and that interaction could  
9 have not happened without the help of Alanna Torres,  
10 Heidi Werner from Energy Solutions, and Kelly Cunningham  
11 from PG&E who really did a fabulous job in keeping the  
12 coordination moving forward through the prerulemaking  
13 process, and then their continued support through the  
14 release of the express term and the 45-day language. A  
15 lot of this would have not happened without their help.

16           Everything that we are presenting today and  
17 during all the hearings that we've heard the past three  
18 days did go through a vigorous lifecycle cost analysis  
19 using the latest TDV values and showing cost  
20 effectiveness to the building owner.

21           On the next slide here, I would like to show you  
22 the schedule as we're moving forward. Right now, today  
23 being May 28th, being the last day of the three-day  
24 hearings on the 45-day express terms, as Commissioner  
25 McAllister earlier said, we would like to have your

1 comments for these hearings sooner than later. We  
2 really have a lot to do and we really want to do the  
3 right thing and get the right message out through our  
4 codes and standards.

5 But the final due date for the comments for the  
6 45-day language, it is June 21st. And, but again, the  
7 sooner we get your comments, the better we are.

8 We're trying to get the -- we will get the 2022  
9 Standards in front of our Commissioners at our set  
10 business meeting, scheduled on August 11th, for  
11 adoption. And then from there, staff is still working  
12 on developing the compliance manual, the electronic  
13 documents, and the software tool needed for you folks to  
14 be able to do the work that you're doing in energy  
15 efficiency.

16 We will -- we are scheduled for approval at the  
17 Building Standards Commission in December. And we're  
18 trying to get everything ready about a year in advance  
19 of the effective date of the 2022 standards, and that  
20 will be January 1st of 2023.

21 On this slide, and this is probably the only  
22 slide you'll see on the environmental impact report.  
23 The environmental impact report has a different  
24 proceeding, it has a different schedule. Currently, the  
25 environmental impact report is in the public comment

1 period. And the public comment period ends on July 8th,  
2 on this document.

3 The final report will be posted to the docket.  
4 It's on a different, separate docket, not the one that  
5 we used for Part 1 and Part 6, late in July. And it's  
6 also going for adoption, tentatively, in August.

7 The docket number for the environmental impact  
8 report is 21-BSTD-02, where for Part 6 and Part 1 it's  
9 21-BSTD-01.

10 I encourage you not -- to double check when you  
11 do submit to the environmental impact report, because if  
12 it comes to 01, most likely it might get lost or will be  
13 delayed to be reviewed, and I just don't want that  
14 happening to you.

15 The link here at the bottom is the link to the  
16 environmental impact report, the docket where you can  
17 submit your comments, or you can even review the  
18 documents that have been submitted and the report  
19 itself.

20 45-day rulemaking comments, it's our docket here  
21 for Part 1 and Part 6. Like I said earlier, the sooner  
22 we get your comments in there the better we are. But  
23 the due date is June 21st, by 5:00 p.m.

24 The link below is the Energy Commission Title 24  
25 link. At this, here you could find the latest set of



1 compliance manuals, compliance documents, the set of the  
2 latest compliance codes, and all the information you  
3 need from 2019 and what's being proposed for 2022, and  
4 more of the historical codes.

5           The prerulemaking comments link is here. And  
6 this is the link used during our prerulemaking  
7 discussions. You will see comments submitted to us  
8 during the prerulemaking. You'll see PowerPoint  
9 presentations and you'll see draft documents there.

10           The last one here is the utility-sponsored  
11 stakeholders, and this is their workshops, and their  
12 documents and comments that they've received for what  
13 they proposed to us here at the Energy Commission.

14           Again, this slide, you'll see this over and over  
15 again today. I just want to make sure that everybody  
16 knows that 21-BSTD-01 is the docket number that you need  
17 to submit your comments to. And if you need to submit  
18 your comments by mail, providing the information here.

19           But I encourage you not to do that and to submit  
20 it into the docket itself. We're not working in the  
21 office and by the time the comments come, are mailed to  
22 our homes or we go back into the office to pick them up  
23 it might be late, and we may not be able to see those on  
24 time.

25           With that, any questions? So, if there's no

1 questions, I apologize you're going to have to hear me  
2 again on the Subchapter 1, for All Occupancy. This is  
3 the general provisions for all parts of Title 24, Part 6  
4 and all building types.

5           So, in this part, in Section 100, the scope  
6 being Section 100, in Subchapter 1. For this code cycle  
7 we have separated multifamily from both low-rise  
8 residential, which includes multifamily buildings up to  
9 three habitable stories, and from nonresidential  
10 sections which were three habitable stories or more.

11           And we've broken those out to three different  
12 subchapters. Subchapters 10 through 12. Those are those  
13 Section 160, 170 and 180 that we had the hearings  
14 yesterday on, of Javier Perez went through all sections  
15 yesterday afternoon.

16           And the reason we did this, we just wanted to  
17 simplify compliance or make it less cumbersome and less  
18 -- easier to understand the multifamily requirements as  
19 we move forward in the code cycles.

20           In Section 100.1, the definitions and rules of  
21 constructions, we updated and added the references to  
22 industry standards to reference the latest set of  
23 documents. We do this every code cycle. We have to  
24 evaluate the ANSI ASME. Anything that we refer to we  
25 have to update, and evaluate, and look at the latest and

1 the greatest that's out on those requirements.

2           We also added new definitions, controlled  
3 environmental horticultures and fan system types. These  
4 are some of the examples of what we did in this section.  
5 And we also did update definitions like occupancy  
6 control types for both mechanical and lighting systems.  
7 For lighting in general, we updated the existing  
8 language and added definitions.

9           The definition section, we're still working on  
10 this and we're trying to do some reevaluating some of  
11 the terms. One of the examples that we're trying to do  
12 for 15-days is we're looking at common area versus  
13 communal areas for multifamily. We're trying to do a  
14 little bit of cleanup to figure out what's more easier  
15 to understand and which is the easier, simplest path to  
16 go forward to prevent any confusions.

17           That was it. That's all we did for that  
18 Subchapter 1. Any comments or questions?

19           I am seeing none, so with that I'm going to go  
20 to Subchapter 2. Subchapter 2 being the mandatory  
21 requirements for manufacture, construction and  
22 installation of systems, equipment and building  
23 components.

24           Again, this is a section that also is required  
25 for all occupancy types. So, what we did, we updated a

1 few of the -- for Section 110.2, the mandatory  
2 requirements for solar space -- requirements for space  
3 conditioning equipments, we updated a few of the minimal  
4 efficiency tables to line up with what ASHRAE 90.1 2019  
5 has.

6 Also, for the 15-day express terms we will also  
7 be looking into adding more tables to provide more  
8 minimal efficiencies for the different equipments, which  
9 are also listed in 90.1

10 If you folks online notice that we're missing  
11 any tables, we should add in a table, please let us  
12 know. We will take those into consideration and  
13 evaluate those for the 15-day language.

14 For Section 110.6, the mandatory requirements  
15 for fenestration products and exterior doors. We used  
16 to have an exception that would exempt vertical site-  
17 built fenestrations up to 200 square feet to use this  
18 site-built fenestration calculation that we had in NA6.  
19 We're removing that for this code cycle. So, that means  
20 that vertical site-built fenestration have to be  
21 certified with NFRC.

22 This change is being done because it's trying to  
23 -- we're trying to alleviate or reduce the uncertainties  
24 of noncompliance of these products in the California  
25 market. And recently, NFRC, the National Fenestration

1 Rating Council, has updated their -- what's know as the  
2 CMA, the Computer Modeling Approach, for calculating  
3 this U factor and SHEG (phonetic) for site-built  
4 fenestration. So, that's now simplified, and it's  
5 easier to use, and more user-friendly, so it's time to  
6 exempt -- remove that exception from the code cycle this  
7 time around.

8           In Section 100.1, the mandatory requirements for  
9 insulation, roofing products, and radiant barrier. In  
10 2016 codes we removed ASTM D6083. ASTM D6083 was  
11 standard specifications for liquid-applied acrylic  
12 coatings. This is a liquid-applied roofing type. We  
13 removed that ASTM. It was because ASTM itself had  
14 decertified this standard procedures back in 2014.

15           In the recent years, this ASTM has been  
16 recertified by ASTM and we thought this is a -- it's  
17 good to have this back on our set of codes as this is  
18 another quality assurance for these liquid-applied  
19 coatings to be used and utilized here in California.

20           In Section 110.9, the mandatory requirements for  
21 lighting controls. We received stakeholder comments  
22 during the lighting code cleanup efforts and it was  
23 requested for us to remove the part night outdoor  
24 lighting controls from the standards. This technology  
25 is in the marketplace, but there's no requirements for

1 when it needs to be installed. So, systems out there,  
2 but there's no real regulations of when to install this.  
3 So, we decided, all right, we need to do some cleanup  
4 and remove that out.

5 In Section 110.10, the mandatory requirements  
6 for solar readiness. We did a lot of cleanup here and  
7 trying to provide clarity of when solar-ready  
8 requirements are triggered in Subsections 110.10(a), for  
9 covered occupancies.

10 In Section 110.10(b)2 we've provided clarity  
11 with regards to regards the azimuth range when a PV  
12 system's installed on a steep-sloped roof. A steep-  
13 sloped roof being a roof pitch of 2 and 12 or greater.

14 In Section 110.12, the mandatory requirements  
15 for demand management. We've provided clarify that  
16 Section 110.12 only applies when a demand-responsive  
17 control are required or installed voluntarily.

18 For demand-responsive lighting controls, wanted  
19 to tie it to the system that is being controlled,  
20 instead of the space size. So, in Section 110.12(c) we  
21 made that clarification.

22 So, that concludes Subchapters 1 and Subchapters  
23 2. Any questions?

24 MR. STRAIT: If there aren't any raised hands, I  
25 have two questions in the Q&A box.

1 MR. BOZORGCHAMI: Okay.

2 MR. STRAIT: Actually, I'm sorry, one of them is  
3 just a comment in support of the expanded definitions.

4 But Laura Petrillo-Groh asks: For the  
5 additional 90.1 tables, ASHRE 90.1 tables being  
6 contemplated for 15-day language, are you looking at  
7 addenda to 2019 or something else?

8 MR. BOZORGCHAMI: I'm going to try to answer  
9 this. If not, Haile if you could jump in, that would be  
10 good, too.

11 The standards, we're trying to update some of  
12 those tables to make sure that we're up with the latest  
13 and the greatest that ASHRE has in 90.1. And we want to  
14 also capture equipment types from 90.1 that are rarely  
15 used here in California. So, that project is still  
16 happening and we're still evaluating.

17 Laura, if you have product type or equipment  
18 type that you would like to see listed please let us  
19 know, and we'll take those into consideration.

20 MR. BUCANEG: Good morning, this is Haile with  
21 the California Energy Commission. Like Payam said, we  
22 are trying to take advantage of equipment that's being  
23 used here in California. So, some of the tables that  
24 we're looking at included are efficiencies for floor-  
25 mounted air conditioning system, direct expansion,

1 dedicated outside air system efficiency tables, so those  
2 type of things that are in 90.1.

3 MR. BOZORGCHAMI: Thank you, Haile.

4 We have one raised hand. Laura, go ahead, I'm  
5 going to unmute you. State your name and affiliation.

6 MS. PETRILLO-GROH: Hello, this is Laura  
7 Petrillo-Groh with the Air Conditioning, Heating and  
8 Refrigeration Institute. Thank you, Payam and Haile for  
9 explaining a little bit more about your thinking on the  
10 expansion of the efficiency tables.

11 The computer air conditions, I think there were  
12 many expanded and included categories of equipment there  
13 and we absolutely support the inclusion. And if there's  
14 anything that AHRI can help with on that, please let me  
15 know.

16 For dedicated outdoor air systems, we have been  
17 working on a crosswalk to a new test procedure for those  
18 products. So, there are existing efficiency levels in  
19 90.1 for the humidification metric in cooling and COP  
20 for heating, for those equipment types. And a newer  
21 standard updates those metrics and AHRI have been  
22 working with the Department of Energy and consultants to  
23 map the ratings in 90.1 to the new standard.

24 So, I'm happy to provide -- you know, to work  
25 with Haile and explain a little bit more about that, the



1 effort in detail. But I did want to flag that those  
2 metrics may be changing in 90.1 to reflect a newer test  
3 procedure.

4 MR. BOZORGCHAMI: Understood Laura. A quick  
5 question for you, do you know when the approval or  
6 adoption of those is going to be taking place? The  
7 timing on that is important to us because we can't  
8 approve something or we can't adopt something that's not  
9 already and set in codes by 90.1. So, do you know if  
10 that's still a work in progress and what's the timeline  
11 on that?

12 MS. PETRILLO-GROH: Yes, that is a work in  
13 progress. We have, I think, narrowed down the -- and I  
14 think we're most of the way there I'll say with the  
15 cooling metrics. The heating metrics are a little bit  
16 tricky.

17 MR. BOZORGCHAMI: Okay.

18 MS. PETRILLO-GROH: So, I'm hoping that we are  
19 able to introduce that table to the 2022 edition of  
20 90.1. So, it will be an addenda to 2019.

21 MR. BOZORGCHAMI: Okay. So, I think we need to  
22 talk about that offline a little bit because we may have  
23 -- we probably need to talk to our legal team about  
24 that, too, and see if we can do that. Because if that  
25 table is adopted and listed after our adoption here at

1 the Energy Commission, it may not work. So, we've got  
2 to figure this one out.

3 MS. PETRILLO-GROH: Yeah, I'm happy to --

4 MR. BOZORGCHAMI: Okay.

5 MS. PETRILLO-GROH: -- a little bit more about  
6 and coordinate those efforts.

7 MR. BOZORGCHAMI: Yeah, please, let's you and I,  
8 and Haile, and others have a discussion on that.

9 MS. PETRILLO-GROH: Thanks.

10 MR. BOZORGCHAMI: Thank you.

11 Any more comments, questions, concerns? If not,  
12 I'm going to hand -- pretty much hand the baton over to  
13 Haile, Haile Bucaneg, and he will talk about Article 1.  
14 This is Part 1 of Title 24, Chapter 10.

15 MR. BUCANEG: Thank you, Payam. Good morning,  
16 my name is Haile Bucaneg and I'm a Senior Mechanical  
17 Engineer with the Buildings Standards Office.

18 Today I will be summarizing changes made to  
19 Article I, the Energy Building Regulations and  
20 Administrative Regulations. You may also know this as  
21 Part 1, Chapter 10 of the Building Code, California  
22 Building Code.

23 Before I start, I would like to thank the  
24 Standards Compliance Office for helping to put together  
25 changes in this section, and Joe Loyer, who is on the

1 call to help us answer any questions that may come up  
2 regarding this section.

3           So, starting off, Section 10-102 contains the  
4 definitions of terms used in the administrative  
5 regulations. Several terms have been modified and added  
6 to increase clarity of the code language.

7           The definition of compliance data exchange file  
8 will be added to Section 10-102 to be consistent with  
9 the same definition in Section JA7. This term defines  
10 the use of the XML schema for Registered Compliance  
11 Documents. And this isn't in 10-102 right now, we're  
12 looking at putting this in during 15-day language.

13           The definition for Compliance Registration  
14 Package will also be added to Section 10-102 during 15-  
15 day language. And again, this is to be consistent with  
16 the same definition in Section JA7. The intent is to  
17 use existing defined terms in the Energy Code to  
18 describe the transmission of data and completed  
19 compliance documents from a data registry to the Energy  
20 Commission repository.

21           The definition for nonresidential data registry  
22 has been modified to exclude the nonresidential  
23 certificates of acceptance recording by the acceptance  
24 test technician certification provider, the ATTCP. This  
25 is to avoid duplicate forms registration and the

1 associated cost should the Energy Commission approve a  
2 nonresidential data registry.

3 The definition for residential data registry and HERS  
4 provider data registry will also be modified to include  
5 a reference to HERS regulations. This is to clarify  
6 that the HERS providers, who are also the residential  
7 data registry registration providers, must comply with  
8 both JA7 and the HERS regulations.

9 And finally, the definition for registered  
10 document will be modified to be Registered Compliance  
11 Document, and the definition will be modified to be  
12 consistent with the same term used in JA7.

13 Moving on to Section 10-103, this section  
14 provides permit certificate informational and  
15 enforcement requirements for designers, installers,  
16 builders, manufacturers and suppliers.

17 So, the first column here on the left, the  
18 clarifications in the left column will be included in  
19 15-day language. And this basically adds references to  
20 Compliance Registration Package, which is a new  
21 definition that we are looking at adding to be  
22 consistent with JA7, and also HERS regulations.

23 These changes are needed to clarify the intent  
24 of regulations and provide a reasonable path to  
25 compliance for HERS providers and other interested

1 parties.

2           Additionally, minor modifications were made to  
3 exclude acceptance test recorded by ATTCPs from the  
4 nonresidential data registry document registration  
5 procedures. Again, this is to prevent duplicate  
6 registration of a single document in both the existing  
7 ATTCPs and potential nonresidential data registry.

8           Finally, in Section 10-103(d)4, ventilation  
9 information was modified to be consistent with new  
10 multifamily requirements and definitions, as well as the  
11 new disclosure requirements for ventilation information  
12 to the building occupants.

13           Sections 10-103.1 and 10-103.2 contain the ATTCP  
14 requirements for lighting controls, which are in 10-  
15 103.1, and mechanical systems which are in 10-103.2.  
16 The changes include two identical subsections which were  
17 added into these sections, into 10-103.1 and 10-103.2.

18           So, in 1-103.1 and .2, Section C3H requires  
19 ATTCPs to create and maintain an electronic database to  
20 track ATT acceptance tests, and record completed  
21 nonresidential certificates of acceptance for lighting  
22 controls in 10-103.1 and for mechanical systems in 10-  
23 103.2.

24           The ATTCP have always provided this database  
25 system. The intent is to make those existing database

1 systems a requirement for future ATTCP applications.  
2 This new section also requires the ATTCPs to submit  
3 specific project data and documents to Energy Commission  
4 using an application program interface, to be adopted by  
5 the Energy Commission. This is intended to be a means  
6 for the Energy Commission staff to gather information  
7 for complaint investigations and general oversight of  
8 the ATTCPs individually, and ATTCP program as a whole.

9 In 10-103.1 and 10-103.2, Section C3I will be  
10 added, which requires ATTCPs to record all  
11 nonresidential certificates of compliance,  
12 nonresidential certificates of installation, and  
13 nonresidential certificates of acceptance associated  
14 with any acceptance tests required by the Energy Code  
15 and listed in Part 6, Section 130.4 for lighting  
16 controls, and Section 120.5 for mechanical systems.

17 This is intended to better enforce the  
18 requirements for all nonresidential building projects to  
19 complete the NRCCs and NRCIs as required by the Energy  
20 Code, in addition to the ATT completing the NRCAs.

21 This section also requires that the ATTCPs  
22 provide monthly data transfer packets to the Energy  
23 Commission for document retention when the Energy  
24 Commission approves an electronic document repository.

25 This is intended to use the ATI system to

1 transfer all compliance data and documents from the  
2 ATTCPs to an approved Energy Commission repository. And  
3 at this time, the Energy Commission has not approved a  
4 nonresidential repository, yet.

5           The changes in Section 10-109 are focused on the  
6 Energy Commission approval requirements for data  
7 registries. So, Sections 10-109 I1A, I1BI, and I2  
8 provide some details regarding the approval of data  
9 registries for both residential and nonresidential.

10           The changes include references to the terms  
11 Compliance Registration Package and the exclusion of  
12 NRCAs recorded by an ATTCP. These changes are intended  
13 to provide consistent clarification of the data registry  
14 requirements and application review process by the  
15 Energy Commission.

16           Section 10-109 I1B, Sections 2 through II  
17 through P, establish restrictions and findings to be  
18 made by the Energy Commission prior to considering any  
19 application for a nonresidential data registry.

20           The necessary findings include the Energy  
21 Commission approval of a data schema for nonresidential  
22 compliance documents and a determination that the Energy  
23 Commission will not lose access to the information  
24 necessary to support the enforcement and development of  
25 current and future Building Code cycles.

1           These requirements provide the following: It  
2 allows the Energy Commission to reject any  
3 nonresidential data registry application submitted until  
4 the Energy Commission formally makes these findings.  
5 And it restricts any section in the Energy Commission  
6 from establishing a set date as to when the Energy  
7 Commission must make these findings. And it reaffirms  
8 that any registration provider may only use data schemas  
9 approved by the Commission.

10           In 10-109(k), photovoltaic system requirement  
11 determinations have been modified to include references  
12 to Section 140.10 and other minor changes. These are  
13 intended to clarify the requirements in the Section 10-  
14 109(k).

15           In Section 10-114 there were several changes  
16 made regarding outdoor lighting zones. This includes  
17 moving rural areas from a default lighting zone of 2 to  
18 lighting zone 1, and revising conditions for designating  
19 higher or lower lighting zones.

20           Additionally, Table 10-114(a), new census  
21 classifications such as urban clusters and default  
22 lighting zone 2 were included. And building types  
23 likely to occur in each zone were included in the table.

24           The changes in Section 10-115 were previously  
25 discussed by staff in earlier presentations, so I won't



1 be going into the changes today.

2 And then, that's it for the administrative  
3 changes. If there are any questions, we can take them  
4 now.

5 MR. BOZORGCHAMI: Thank you, Haile.

6 Peter, I don't see any raised hands in the  
7 participation. Oh, we've got one, I took that back.  
8 Michael, I'm going to unmute you and go ahead and state  
9 your name, and affiliation, please.

10 MR. SCALZO: Michael Scalzo, I'm with NLCAA. I  
11 just had a quick question on a clarification of what  
12 report means when we are talking in Section 10-103.1,  
13 the ATT will record the NRCC and the NRCI, in addition  
14 to NRCAs. Record, is that basically just basically  
15 giving like a snapshot of the document or would it have  
16 to be like some type of an electronically-formatted  
17 form?

18 MR. LOYER: Would you like me to answer that  
19 one?

20 MR. BOZORGCHAMI: Go ahead, Joe.

21 MR. LOYER: Okay. This is Joe Loyer, a Senior  
22 Mechanical Engineer, California Energy Commission.

23 So, record in this context is left up to the  
24 Energy Commission and the ATTCPs to actually, truly  
25 establish what exactly that means. But at this point

1 we're not closing the door on it, meaning as much as  
2 recording in terms of the XML schemas and the actual  
3 data. But we are also allowing the ATTCPs to simply  
4 record the static picture of the PDF. By the time the  
5 ATTCPs actually do see these documents, they are already  
6 created. Well, if everybody does what they're supposed  
7 to they are already -- these documents are already  
8 created. They are approved by the local jurisdiction.  
9 And they should be static forms at that point. So, a  
10 static reporting of those forms is sufficient for the  
11 time being.

12 MR. SCALZO: Thank you very much for that  
13 clarification.

14 MR. BOZORGCHAMI: Thank Joe. Thank you, Mr.  
15 Scalzo.

16 Any other? If not, we can move on to the Q&A.  
17 Peter?

18 MR. STRAIT: Sure. So, we have two questions  
19 currently. The first is from Gina Rodda who asks:  
20 Where can we see the proposed 15-day language for Part  
21 1?

22 MR. BOZORGCHAMI: Gina, the proposed language  
23 for the 15-day language will be as soon as June 21st  
24 comes around and we capture all the comments that we've  
25 received, staff is going to be working on the 15-day

1 language. And we have a short turnaround. I want to  
2 say about a week, a week and a half to turn those around  
3 and start the 15-day process.

4           Meanwhile, you're more than welcome to  
5 communicate with us and we could maybe answer specific  
6 concerns or questions that you may have.

7           MR. QAQUNDAH: Payam, the 15-day language will  
8 be posted to the docket when --

9           MR. BOZORGCHAMI: Yes, it will be posted. Yeah,  
10 you're absolutely right, Jimmy. That will be posted to  
11 the docket.

12           MR. STRAIT: Second, Laura Petrillo-Groh has a  
13 similar question. She asks: Will you please review any  
14 15-day language contemplated changes that impact  
15 manufacturers in Section 10-103?

16           MR. BOZORGCHAMI: Jimmy, can you answer that  
17 question? Can we do that? I mean I'm willing to, if  
18 we're allowed to.

19           MR. QAQUNDAH: Yeah.

20           MR. BOZORGCHAMI: Okay.

21           MR. QAQUNDAH: Yes. Sorry, I'm just reading it  
22 again. But yeah, we're going to -- we'll look at that.

23           MR. BOZORGCHAMI: Okay. So, yeah, Laura, let's  
24 you and I be in communications and we could maybe have a  
25 discussion of the tables that are going to be

1 implemented and what's going to impact manufacturers.

2 MR. STRAIT: That's all that I have in the Q&A  
3 box presently.

4 MR. BOZORGCHAMI: Okay. I don't see any raised  
5 hand or any comments, questions in the Q&A window.

6 So, with that I mean it's -- it's only an hour.  
7 Should we take a ten-minute break and then have Michael  
8 Shewmaker and Danny Tam get ready to present on the  
9 joint appendices? That was supposed to be presented  
10 this afternoon, but since we don't have any comments and  
11 we're ahead of schedule let's move it up, so we could  
12 get you guys out for a three-day weekend sooner.

13 COMMISSIONER MCALLISTER: That sounds great.  
14 This is Commissioner McAllister. I'm good with that.

15 MR. BOZORGCHAMI: Okay.

16 COMMISSIONER MCALLISTER: So, a ten-minute break  
17 would be 10:05 we'd reconvene?

18 MR. BOZORGCHAMI: Yes, yes, at 10:05 we will  
19 reconvene. Than you.

20 COMMISSIONER MCALLISTER: Okay, thanks everyone.

21 (Off the record at 9:55 a.m.)

22 (On the record at 10:04 a.m.)

23 MR. BOZORGCHAMI: I think we should start. And  
24 I think I'm going to choose Mikey -- excuse me. His  
25 name is Mikey is in the office. But Michael Shewmaker

1 and Danny Tam, who will be presenting the changes for  
2 the joint appendices, which is part of the reference  
3 appendices. Thank you. Go ahead, Mikey.

4 MR. SHEWMAKER: Payam, you might want to confirm  
5 that Commissioner McAllister is back.

6 MR. BOZORGCHAMI: Yes.

7 COMMISSIONER MCALLISTER: Yeah, I am back, yeah,  
8 and ready to start. Thanks guys, go ahead.

9 MR. BOZORGCHAMI: Thank you, Commissioner.

10 MR. SHEWMAKER: All right. Hopefully, everybody  
11 can see my screen.

12 MR. BOZORGCHAMI: Yes.

13 MR. SHEWMAKER: Good morning everyone. My name  
14 is Michael Shewmaker and I'm an Energy Commission  
15 Specialist in the Building Standards Office.

16 This morning my colleague, Danny Tam, and I will  
17 present to you the proposed changes to the joint  
18 appendices.

19 In JA1 we made some clarification, updated the  
20 documents relied upon and added new definitions where  
21 needed, and removed those that were no longer needed.  
22 Updates made to the documents relied upon or to ensure  
23 that the reference documents are up to date and using  
24 the latest version.

25 Additionally, we removed a few documents that

1 were either no longer available or no longer being  
2 referenced within the code.

3           In JA2.1 we did some cleanup and updated the  
4 climate/weather file references on format dataset. For  
5 example, some of the weather file formats were outdated  
6 and we added global horizontal solar radiation pressure  
7 and rainfall.

8           In JA3.2 we updated the time dependent values  
9 for 2022.

10           In JA4.4.1 we added a note to clarify that any  
11 and all insulation installed in California must be  
12 certified in accordance with Section 110.8 of the Energy  
13 Standards.

14           In JA4.1.7 we updated the language to clarify  
15 that SPF insulation R-values must be certified with the  
16 Department of Consumer Affairs, Bureau of Household  
17 Goods and Services.

18           In JA4.2, Table 4.2.2, we added columns for R-  
19 17, R-20 and R-23, continuous insulation to provide  
20 values in alignment with the single-family roof  
21 alterations proposal.

22           And then in JA5 and JA6 there are no proposed  
23 changes for 2022, so I'm going to skip along to JA7.

24           And a lot of the information that you're going  
25 to hear in this section was covered earlier by my

1 colleague, Haile Bucaneg. So, I apologize, some of this  
2 might be a little bit repetitive.

3 Now, this first change did not make it into the  
4 45-day express terms, and so we plan to include it in  
5 the 15-day language.

6 But in JA7.1 we provided some clarification. We  
7 added reference to the Compliance Registration Package.  
8 We clarified that when we're referring to the document  
9 repository we are in fact referring to the Commission  
10 compliance document repository. And we updated some  
11 references to the data registry requirements manual.

12 In JA7.2, we made some clarifications and  
13 grammatical corrections to existing definition and added  
14 some new definitions where needed.

15 The Compliance Registration Package language was  
16 modified, as was the nonresidential data registry  
17 language, and the Registered Compliance Document  
18 language.

19 Additionally, we added two new terms. The first  
20 of application program interface, or API, and the second  
21 being external digital data source provider, or EDDS  
22 provider.

23 And then in the registration language we added a  
24 reference to the Compliance Registration Package.

25 And finally, in the registration provider

1 language we updated the reference to the data registry  
2 requirements manual.

3           In JA7.3 we again made some clarifications and  
4 minor grammatical corrections. We updated the  
5 references to the data registry requirements manual and  
6 added a reference to the Compliance Registration  
7 Package.

8           In JA7.4 we provided some clarification. We  
9 again updated the references to the data registry  
10 requirements manual. And for 15-day language, we plan  
11 to add references to the Compliance Registration  
12 Package.

13           Also, for the 15-day express terms we plan to  
14 add some new language to JA7.4.1 regarding the CEC's  
15 access to information collected by the data registries.  
16 Some of the items included in this new language include  
17 a search function with no limits on size, lists of all  
18 user accounts, searchable filter requirements, and  
19 summary report requirements.

20           In JA7.4.8, this is a new section for 2022 that  
21 covers Energy Commission oversight of the data  
22 registration providers. Some of the new requirements  
23 include Commission access to Compliance Registration  
24 Packages within 30 days of request, as well as a  
25 requirement for registration providers to explain the



1 basis in writing if they are unable to comply.

2 It also allows for possible review of provider  
3 approval if the registration provider fails to comply.

4 In JA7.5 and 7.6 we provided some clarifications  
5 and minor grammatical edits. We updated the references  
6 to the data registry requirements manual. And for 15-  
7 day language, we plan to add references to the  
8 Compliance Registration Package.

9 For the 15-day express terms, in JA7.5 we also  
10 plan to make some minor corrections to JA7.5.6.1.2,  
11 which covers project status report information for  
12 nonresidential projects. As well as JA7.5.6.2, which  
13 covers revision control.

14 And in JA7.6, for 15-day language we plan to add  
15 some language clarifying the data registries shall not  
16 register a certification of acceptance document that has  
17 been or is expected to be recorded by an acceptance test  
18 technician certification provider, or ATTCP.

19 And also, we added some language clarifying that  
20 data must be validated with an XML schema approved by  
21 the Energy Commission.

22 In JA7.7, we added the API data transference  
23 option, and updated references to the data registry  
24 requirements manual. And then, for 15-day language we  
25 plan to add references to the Compliance Registration

1 Package, as well as add some language regarding XML data  
2 transference to the Commission compliance document  
3 repository.

4 In JA7.8, like a lot of the other sections we  
5 made some clarifications and minor grammatical edits.  
6 We updated references to the data registry requirements  
7 manual.

8 And then, in JA7.8.2.6 we added language to the  
9 effect that each EDDS that the API interfaces with must  
10 be approved.

11 In 7.8.4.1 we added language clarifying that  
12 the executive director has the authority to initiate a  
13 review of any data registry approval upon petition by  
14 any party or recommendation by Commission staff.

15 In JA7.8.5 we added language clarifying that the  
16 portions of a data registry user manual that are  
17 incorporated as help screens into the user interface do  
18 not need to be publishes separately. Their inclusion of  
19 the user interface satisfies the requirements of the  
20 subsection.

21 In JA7.8.5.5 we added language clarifying that  
22 EDDS proprietary information can be excluded from the  
23 data registry user manual. However, the EDDS user  
24 instruction must be made available to all authorized  
25 users that use the EDDS service or software.

1           And lastly, for 15-day language we plan to add a  
2 new section, JA7.8.2.7 which would be titled "Record of  
3 Quality Assurance Action Taken" and will include the  
4 following requirements: It will require a three-year  
5 record of quality assurance actions taken, as well as a  
6 record of all investigations and remedies, and a record  
7 of all Energy Commission initiated investigation.

8           In JA8, we did a little language cleanup. And  
9 where we previously just said efficacy, we specified  
10 that we are referring to luminous efficacy for greater  
11 accuracy.

12           MR. BOZORGCHAMI: Mikey, one second.

13           MR. SHEWMAKER: Yes.

14           MR. BOZORGCHAMI: Apologize. This is Payam. I  
15 just noticed someone making a comment that they're not  
16 seeing what Mike was speaking to. So, is everybody else  
17 seeing the screen?

18           COMMISSIONER MCALLISTER: Yes.

19           MR. BOZORGCHAMI: Okay. Okay, we're good.  
20 Thank you.

21           MR. SHEWMAKER: Okay. And so, in JA9 and JA10  
22 there are no proposed changes for 2022. So, now I'm  
23 going to stop here and pass things off to my colleague,  
24 Danny Tam, who will take us through the last few  
25 sections of the joint appendices. Thank you.

1           MR. TAM: Thanks. I'm Danny Tam, CEC staff.  
2 I'll be presenting the rest of the JA changes.

3           JOFM is the qualification requirement for PV  
4 systems. The changes in this joint appendix are mostly  
5 for clarifications. They were made based on the lessons  
6 we learned after the adoption of the 2019 standards.

7           First, we separated orientation language into  
8 prescriptive and performance to reduce confusion. We  
9 didn't really change anything. Prescriptively, the  
10 system must be between 90 to 300 degrees from true  
11 north. And performance, you just have to model, you  
12 know, whatever is oriented.

13           Second, we added CFI-2. CFI stands for  
14 California Flexible Installation. It is an option in  
15 the performance software when you don't want to model  
16 the actual orientation of the arrays.

17           So, the original CFI is now called CFI-1. And  
18 this option allowed arrays to be installed between 150  
19 to 278 degrees. We added CFI-2 and it's a new option  
20 that allows installation between 105 to 300 degrees.

21           We also clarified the shading requirements.  
22 Previously, the prescriptive requirements was more  
23 ambiguous, so now we set a clear prescriptive target of  
24 98 percent annual solar access.

25           The language for solar assessment tool has also

1 been cleaned up and included a list of functions for CEC  
2 approval.

3           The next slide. Okay, J12 is the qualification  
4 requirement for battery storage systems. The biggest  
5 change for 2022 is that unpaired battery storage system  
6 can now be qualified for the credit. So, paired system  
7 is the a battery system that's connected onsite PV. So,  
8 unpaired is just, you know, does not have an onsite PV.

9           So, we also clarified that the minimum roundtrip  
10 of efficiency, it's a prescriptive requirement only.  
11 For performance, you would model the actual  
12 roundtrip efficiency.

13           We also added language to allow future control  
14 strategy that minimize GHG. And we added control  
15 strategies for unpaired storage systems.

16           The next slide. J13 is the qualification  
17 requirement for heat pump water heater demand management  
18 systems. This is a new joint appendix and a new  
19 compliance option in the software. So, J13 provides the  
20 minimum qualification requirement for heat pump water  
21 heater that's needed to be certified to the Energy  
22 Commission.

23           This is identical to the J13 compliance option  
24 that was approved July of last year. So, we're now  
25 officially incorporating it as part of the Title 24

1 Standard.

2 The next slide. J14 is the qualification  
3 requirement for central heat pump water heating system,  
4 and this is a new JA. And J14 provides the minimum  
5 requirement for central heat pump water heaters for  
6 certification to the Energy Commission for use in the  
7 performance software.

8 As a note, this is not a mandatory or  
9 prescriptive requirement for certification. A  
10 manufacturer only needs to do it if they want to include  
11 their central heat pump water heater product in the  
12 performance software.

13 To reduce the burden for testing, we're going to  
14 allow simulated performance data, as long as a basic  
15 model is tested and the simulated performance is the  
16 based on the same basic model that share the same series  
17 compressor, heater exchanger, and architectures the  
18 tested basic model.

19 The next slide. And that's in for the joint  
20 appendix changes. Now, we open up for questions.

21 MR. STRAIT: We do have a number of questions in  
22 the Q&A box. Given that I don't see any hands raised, I  
23 can get started on those if preferred.

24 Oh, it looks like Payam might be having some  
25 technical difficulties. I'll go ahead and go through

1 the Q&A box then.

2 MR. BOZORGCHAMI: Thank you, Peter. Sorry about  
3 that, yeah.

4 MR. STRAIT: Oh, no worries.

5 Shelby Gatlin asks: When will the draft DRRM be  
6 released?

7 MR. BOZORGCHAMI: There's not a set date for  
8 that at this time. The language is in there just when  
9 we are ready to develop the DRRM that we can, and have  
10 that released.

11 MR. STRAIT: Russ King asks: If you have known  
12 changes to the JA7 sections for 15-day language that did  
13 not make it into the 45-day language, can you please  
14 provide them in advance to give affected parties  
15 adequate time to respond to them?

16 MR. BOZORGCHAMI: Sure.

17 MR. STRAIT: Let me see, Russ King has a similar  
18 question here. Sorry, some of these aren't questions.  
19 Let me dismiss this.

20 MR. BOZORGCHAMI: Oh, to respond to Russ a  
21 little bit more in detail, that's still being developed  
22 and there's a lot of work still happening on that. But  
23 yeah, we could share what we do develop.

24 MR. STRAIT: Gina Rodda asks: For JA11 can we  
25 add a procedure that supports the documentation

1 requirements for when the exception of PV is used, the  
2 less than 80 square feet with 70 percent or greater  
3 solar access? Building departments are struggling with  
4 how to verify that this is true at plan check.

5 MR. TAM: Yeah, this is Danny Tam, CEC staff.  
6 Yeah, we can consider it. We heard this is an issue.  
7 We actually asked an approved solar assessment tool  
8 provider to help us solve this issue. So, we can  
9 consider putting in some language, or it could be just a  
10 blueprint, or we can talk about it in the compliance  
11 manual.

12 MR. BOZORGCHAMI: Peter, there was a comment  
13 that came from -- first of all, thank you Danny. There  
14 was a comment that came from Russ King regarding JA7.  
15 Can you --

16 MR. STRAIT: It's the same request that they --  
17 Russ also says that we've mentioned a lot of JA7  
18 sections that were not shown directly on the slides.

19 MR. BOZORGCHAMI: Okay.

20 MR. STRAIT: And if those would be available in  
21 writing. Now, I don't know if that's referring to the  
22 45-day language where --

23 MR. BOZORGCHAMI: I think what it is, I think  
24 we'll add some bullets to that one slide for JA7 prior  
25 to posting it to our docket, just for clarity purposes.



1 MR. STRAIT: Sure. And all of the express terms  
2 are available on the docket currently, also.

3 MR. BOZORGCHAMI: Yeah, they are available on  
4 the docket. As the PowerPoint presentation, we will add  
5 that in. And by the way, this PowerPoint presentation  
6 will be posted on the docket next week, hopefully  
7 Tuesday, so we'll have a slide added to that. Thank  
8 you.

9 So, with that, if any more comments, questions?  
10 I don't see any more raised. Oh, we've got one raised  
11 hand. Go ahead, Shelby. I'm going to unmute you and go  
12 ahead and state your name and affiliation.

13 MS. GATLIN: Can you hear me.

14 MR. BOZORGCHAMI: Yes.

15 MS. GATLIN: Hi, this Shelby Gatlin, I'm the CEO  
16 of CalCERTS. There were several sections of JA7, and  
17 thank you for including them in the slides when you post  
18 them. There's also some new proposed language that  
19 seems like it's coming out in the 15-day language. Can  
20 we get that sooner than later?

21 MR. BOZORGCHAMI: Yes. Yes, I said we will  
22 share it with the parties when the 15-day language is  
23 developed and we will share that sooner, just to give  
24 you guys enough time to respond.

25 MS. GATLIN: Okay.

1 MR. BOZORGCHAMI: I don't have a timeline right  
2 now.

3 MS. GATLIN: But there were things that were  
4 mentioned in our overview that are brand-new  
5 requirements that have never been proposed to the  
6 providers so --

7 MR. BOZORGCHAMI: Okay.

8 MS. GATLIN: Thank you.

9 MR. BOZORGCHAMI: Okay. I don't see any other  
10 raised hands or questions in the Q&A. So, Commissioner,  
11 if you're okay with that, can we go into the residential  
12 appendices, R?

13 You're muted, sir, I'm sorry. Commissioner,  
14 you're still muted.

15 COMMISSIONER MCALLISTER: Okay, can you hear me  
16 now?

17 MR. BOZORGCHAMI: Yes.

18 COMMISSIONER MCALLISTER: Okay, I got it. Okay,  
19 there's too many microphones.

20 Yeah, so I am good with that. I did want to  
21 make a comment just encouraging both staff and  
22 stakeholders essentially to kind of get on the stick  
23 with working through some of those points that were  
24 stated verbally regarding the registries.

25 MR. BOZORGCHAMI: Sure.

1           COMMISSIONER MCALLISTER: Those details are  
2 going to matter. And obviously, you know, I think the  
3 right people are on the call right now, but I jut want  
4 to encourage people to have quick iteration and also  
5 together with counsel to make sure we're doing that  
6 properly.

7           MR. BOZORGCHAMI: Definitely. Yeah, absolutely.

8           COMMISSIONER MCALLISTER: Okay.

9           MR. BOZORGCHAMI: Thank you.

10          COMMISSIONER MCALLISTER: Sure. Thanks.

11          MR. BOZORGCHAMI: So, Cheng Moua, one of our  
12 lead mechanical engineers will present on the  
13 residential appendices, which is also a part of the  
14 complete package of the reference appendices.

15          MR. MOUA: Okay, thank you. Can you hear me  
16 okay, Payam?

17          MR. BOZORGCHAMI: Perfect.

18          MR. MOUA: All right. Well, thank you and hello  
19 everyone. My name is Cheng Moua and I am mechanical  
20 engineer here in the Building Standards Office. I'll be  
21 covering the revisions to the 2022 RA, reference  
22 appendices. So, there's not too many changes so,  
23 hopefully, you know, we could get through this fairly  
24 quickly.

25          First revisions were made to the 2022

1 residential appendices to incorporate the VCHP  
2 compliance options. That's the variable capacity heat  
3 pump compliance option that was approved back in 2019.  
4 So, this compliance option has been effective, but was  
5 approved after the 2019 cycle was adopted so, therefore,  
6 it was not incorporated in the 2019 documents. So,  
7 basically, the language from the compliance option staff  
8 report was simply brought over to the 2022 residential  
9 appendices.

10           So, I'm not going to read them all here, but it  
11 adds and revises the sections that are listed here.

12           Next, RA3.1.4.3, diagnostic duct leakage was  
13 also revised. The duct leakage procedure setup, when  
14 ventilation does connect to space conditioning system  
15 ducts was updated to clarify sealing or taping off the  
16 branch ventilation duct during a duct leakage test is  
17 not allowed.

18           RA3.7.4.3, the protocol for kitchen, local  
19 mechanical exhaust range hood verification was revised  
20 into the new 2022 metric for capturing efficiency.  
21 That's for kitchen ranges.

22           RA3.7.4.4, the protocol for HRV/ERV performance  
23 verification was added to include HRV/ERV recovery  
24 efficiency and fan efficacy of a compliance metric. And  
25 this provides verification for the new 2022 standards

1 heat recovery and fan efficacy requirements. But no  
2 revisions are expected for the 15-day language to this  
3 section, to clarify that the fan efficacy is calculated  
4 based on the wattage and the air flow ratings listed in  
5 the CEC-approved directory.

6 So, RA3.8, field verification of diagnostic  
7 testing of air leakage was updated to incorporate the  
8 procedures in the most recent version of RESNET 380.

9 So, this was updated from version 2016 to version 2019.

10 RA3.9, field verification and diagnostic testing  
11 of whole house fans was updated to replace the blower  
12 door protocol with the new air flow rate measurement  
13 that uses attic pressure matching and a fan flow meter.  
14 So, the blower door protocol was found not to measure  
15 the same air flow rate as the other 3.9 procedures that  
16 measures the air flow at the whole house inlet grill.  
17 So, with the new procedure that adds the attic pressure  
18 matching does provide results that are equivalent to the  
19 RA3.9 procedures.

20 So, RA4.4, water heating, was updated to reflect  
21 the 2022 standards language that aligns pile insulation  
22 requirements with the California Plumbing Code.

23 With a few minor edits to envelope-related  
24 items, RA3.5.6.1, SPF, spray polyurethane foam thermal  
25 specification was updated to clarify that R-values must

1 be certified with the Department of Consumer Affairs,  
2 Bureau of Electronic and Appliance Repair, Home  
3 Furnishings and Thermal Insulation.

4 RA3.5.6.3, SPF roof ceilings, clarifies that  
5 recessed luminaires must either be rated at SPF  
6 insulation contact or separated from the spray foam by a  
7 barrier box.

8 So, that's it for the changes to the residential  
9 appendices. I'll take any questions, if there's any.

10 MR. BOZORGCHAMI: Thank you, Cheng. I don't  
11 have any raised hands here. Peter?

12 MR. STRAIT: Laura Petrillo-Groh mentions that  
13 they have a few questions about JA14, but doesn't have  
14 those typed into the chat box. I'm assuming she might  
15 want to raise her hand or that she's busy typing, either  
16 way.

17 MR. BOZORGCHAMI: Oh, she raised her hand,  
18 Peter.

19 MR. STRAIT: Okay.

20 MR. BOZORGCHAMI: Go ahead, Laura.

21 MS. PETRILLO-GROH: Hi, thank you. I appreciate  
22 you taking these questions a little bit late. So, this  
23 is Laura Petrillo-Groh with the Air Conditioning,  
24 Heating, and Refrigeration Institute.

25 Looking at the JA14, can you tell me a little

1 bit more about the though process behind the need to  
2 introduce an additional test procedure for the products?

3 MR. BOZORGCHAMI: J14. Okay, Danny are you on?

4 MS. PETRILLO-GROH: The central heat pump water  
5 heating system.

6 MR. BOZORGCHAMI: Yeah. Danny, are you on the  
7 call, still?

8 MR. TAM: Payam, I was muted.

9 MR. BOZORGCHAMI: Oh.

10 MR. TAM: Yeah, so I mean that's -- this is  
11 something that's been an issue for, you know, a few  
12 years. So, these big central heat pump water heater  
13 products, you know, they're a federally regulated  
14 product, but that there's no like minimum efficiency  
15 requirement. So, we've been trying to model these  
16 things for a few years.

17 And you know, the only way we can is to get some  
18 performance data from the manufacturer.

19 MR. STRAIT: Yeah, so it might be worth  
20 clarifying the J14 requirement is not there to supersede  
21 federal requirements for testing, which they're to  
22 gather information about specific systems so that their  
23 performance can be modeled in the software.

24 MR. TAM: And, yeah, to be clear this is not a  
25 mandatory or prescriptive requirement. It's strictly

1 voluntary. We have a prescriptive option for central  
2 heat pump water heat, which does not require J14  
3 certification. So, this is really, you know, if you  
4 want to have your product modeled we need, you know,  
5 some data. So, this is why we want to adopt J14.

6 MR. STRAIT: Yeah, and to be clear Danny it's  
7 true that this equipment can also be installed under the  
8 performance approach without J14 certification. They  
9 just wouldn't receive specific credit for modeled system  
10 performance, but would receive just a flat --

11 MR. TAM: Yeah, yeah, we talked about providing  
12 like a generic model type, like in the software you pick  
13 a specific model. We could provide a generic model so,  
14 you know, it does not require J14 certification.

15 MS. PETRILLO-GROH: Thanks. The reason I asked  
16 is it was flagged to me by the Motor Heater  
17 Manufacturers as perhaps being I think maybe some  
18 conflict with the federal procedure, so that's something  
19 that I think we'll be discussing a little bit more  
20 internally to see if there are proposals we can make or  
21 if there is an alternative that might suit your -- suit  
22 the modeling needs as it would not, I think, reveal what  
23 is deemed to be proprietary information regarding the  
24 manufacturers' application of defrost.

25 MR. TAM: Yeah, understand.



1 MS. PETRILLO-GROH: Okay.

2 MR. TAM: We actually had some extensive  
3 discussion, you know, with some of the manufacturers. I  
4 think we solved most of their issues with our current  
5 language, but we can certainly chat if that's not the  
6 case.

7 MS. PETRILLO-GROH: Thanks. Yeah, we'll have  
8 additional conversations to see if there are outstanding  
9 issues and get back to you. I just wanted to flag that  
10 here. Thank you so much.

11 MR. TAM: Okay, thanks.

12 MR. BOZORGCHAMI: Thank you.

13 MR. STRAIT: The next question in the Q&A box  
14 comes from CalCERTS training, who's asking: For  
15 RA3.1.4.3, what about HRV/ERV tied to mechanical  
16 systems, are these considered CFI?

17 And I'll go ahead and read Russ King's comments  
18 as well because it seems to be related. Russ King asks:  
19 We submitted a comment for pre-45-day language, it was  
20 not responded to yet, regarding testing ERV/HERV systems  
21 when they are tied into the HVAC ducts. This makes  
22 testing very difficult. We recommend not allowing it.  
23 And if it is allowed, it needs to be addressed in the RA  
24 protocols.

25 MR. MOUA: Yeah, we did receive those comments

1 and we're having ongoing internal discussions on that.  
2 And I'll get back to you on that one, Russ. But  
3 definitely we received those comments and we're working  
4 on it.

5 MR. STRAIT: Those are the only questions I have  
6 in the Q&A box.

7 MR. BOZORGCHAMI: Thank you. Is there any more  
8 comments, questions, concerns?

9 With that, I think we could maybe jump into the  
10 nonresidential appendices, which is also a part of the  
11 reference appendices.

12 Haile, would you be able to present on that? I  
13 think on this one it's Haile Bucaneg and Daniel Wong  
14 from the Standards Compliance Office who are going to be  
15 presenting.

16 MR. BUCANEG: Sure, I'm okay to present on this.  
17 We want to -- Daniel, are you on? I just want to make  
18 sure that we have --

19 MR. BOZORGCHAMI: Sure.

20 COMMISSIONER MCALLISTER: Let me just say, this  
21 is Commissioner McAllister, I just want to chime in.  
22 So, that discussion was great that we had just now. I  
23 kind of felt like there might be some percolation still  
24 out there, so I just want to invite us to be flexible in  
25 terms of later on in the day if people want to circle

1 back to that and ask additional questions that would be  
2 okay. I just want to make sure that the right staff  
3 remains on the line for that.

4 MR. BOZORGCHAMI: Sure, absolutely. Even going  
5 through the nonresidential appendices right now, we will  
6 have to have a hard stop if we go beyond 11:45, but we  
7 will pick it back up again at 1:15.

8 MR. BUCANEG: Sure. Daniel, are you on? Like I  
9 said, I want to make sure.

10 MR. WONG: Yeah, this is Daniel Wong.

11 MR. BUCANEG: Okay, perfect.

12 MR. WONG: I'm ready.

13 MR. BUCANEG: Okay, so good morning everyone.  
14 Again, my name is Haile Bucaneg and I'm with the  
15 Building Standards Office.

16 And this morning Daniel Wong and I will be  
17 presenting the proposed changes for the nonresidential  
18 appendices. We will be going through the nonresidential  
19 appendix in chronological order.

20 Starting off here, first up in NA1. There were  
21 some updated changes to the nonresidential HERS  
22 verification testing and documentation procedures. In  
23 NA1.1 updates pertain to new duct leakage requirements  
24 and tables for kitchen range hoods. This is included --  
25 this includes references in Table NA1.1 to NA2.2.4.1.4

1 for kitchen range hoods and NA2.2.4.1.5 for heat  
2 recovery ventilation or energy recovery ventilation  
3 systems.

4 In NA1.9, clarification for alternative  
5 procedures when acceptance test technicians perform  
6 field verification in nonresidential occupancies. That  
7 was specified to be performed by HERS raters and that  
8 alternative procedures are applicable to all HERS  
9 procedures specified in NA2.

10 In NA2.1.1 there were several cleanup updates,  
11 and references, and titles for the section based on  
12 proposed amendments.

13 NA2.1.4.1, phenomenal air handler airflow,  
14 includes updates to the requirements included in the  
15 residential appendices.

16 Table 2.2-1 includes references to the  
17 appropriate sections for kitchen exhaust verification  
18 and also for HRV and ERV verification.

19 In NA2.2.4.1.2 and 2.2.4.1.5 updates were made  
20 to include HRV and ERV recovery efficiency and fan  
21 efficacy as compliance metrics. It should be noted that  
22 additional changes to NA2.2.4.1.5 are expected and this  
23 is to clarify that fan efficacy is calculated -- is a  
24 calculated value based on watts and air flow ratings  
25 listed in the CEC-approved directory.

1           Finally, in NA2.2.4.1.4 updates to include  
2 capture efficiency as a compliance metric were made.

3           For field verification and diagnostic testing of  
4 multifamily dwelling units in NA2.3 updates were made to  
5 incorporate the most recent version of RESNET Standards  
6 380.

7           In NA2.4 and NA2.5 there were -- or, NA2.4 and  
8 2.5 were added to provide procedures for whole building  
9 envelope leakage field verification and diagnostic  
10 testing and air barrier verification.

11           In NA6.1 and NA6.5, clarification was included  
12 to cover nonrated site built skylights and alterations  
13 to vertical fenestration. Also, exceptions for  
14 nonresidential compliance for 200 square feet were  
15 removed.

16           And then under building envelope acceptances  
17 tests in NA7.4.5, clarification for procedures applying  
18 to all interior and exterior horizontal slats was  
19 provided. And that's it for NA7.4.5.

20           But from here, Daniel will be taking over to  
21 discussed our proposed updates to the remaining  
22 sections.

23           MR. WONG: Okay, I'm going to share my screen.  
24 Okay, can you see my screen?

25           MR. BUCANEG: Yes, but we can -- oh, there you

1 go.

2 MR. BOZORGCHAMI: Yeah, we can see your screen.

3 MR. WONG: Okay, perfect. Good morning, my name  
4 is Daniel Wong. I'm a Senior Electrical Engineer in the  
5 Standards Compliance Office and I will be presenting on  
6 the remaining changes in nonresidential appendix NA7.

7 In NA7.5.4 we've added acceptance testing  
8 procedures for verifying exhaust air heat recovery  
9 bypass controls for dedicated outside air systems. This  
10 is in accordance to the proposed prescriptive  
11 requirements for dedicated outside air systems in  
12 Section 140.4(2).

13 In NA7.5.17 we've revised the testing procedures  
14 for verifying occupied standby mode for occupant sensor  
15 ventilation controls. This change was necessary to  
16 reflect changes to occupied standby requirements in  
17 Section 121.1(d)5.

18 The language in NA7.6.1 for automatic  
19 daylighting controls acceptance testing was revised and  
20 updated to improve clarity and consistency.

21 We've also revised the construction inspection  
22 for automatic daylighting controls to more closely align  
23 with the requirements in Section 130.1(d).

24 Also, we've added clarification to the testing  
25 procedures for secondary sidelit daylit zones, and

1 daylit zones in parking garages.

2           Finally, we've added an alternative partial  
3 daylight test to address stakeholder concerns with the  
4 feasibility of using the existing partial daylight test  
5 in all conditions, particularly in daylit spaces with  
6 dark glazing or small window areas.

7           The language in NA7.6.2 for automatic shutoff  
8 controls acceptance testing was revised and updated to  
9 improve clarity and consistency.

10           We've revised the construction inspection,  
11 again, for automatic shutoff controls to more closely  
12 align with the requirements in 130.1(c).

13           We've added clarification to testing procedures  
14 for each type of occupant sensing control, including  
15 partial on, partial off, and vacancy sensors. And then,  
16 we've added new testing procedures for verifying multi-  
17 zone occupant sensing controls in open office areas in  
18 accordance to proposed mandatory requirements in Section  
19 130.1(c) 6(b).

20           In NA7.6.2 we've revised the construction  
21 inspection for demand responsive control acceptance  
22 testing to more closely align with the requirements in  
23 Section 110.12(a). We removed the requirement to verify  
24 that illuminants must not be reduced below 50 percent of  
25 design Illuminance to align the testing procedures with

1 the code.

2           And we've added an additional testing method  
3 which will allow verification of demand response power  
4 reduction based on full building current measurements.  
5 And this was to provide an alternative to expedite  
6 testing for larger facilities with disaggregated  
7 circuits.

8           In NA7.6.4 we've relocated the requirements for  
9 institutional tuning power adjustment factor acceptance  
10 tests from NA7.7.5 to NA7.6.4, so that all indoor  
11 lighting control acceptance tests are contained in  
12 NA7.6.

13           We've also revised and updated the procedures to  
14 improve clarity and consistency.

15           In NA7.6.5 we've added new testing procedures to  
16 verify demand responsive controls for controlled  
17 receptacles. And this was in accordance to new proposed  
18 mandatory requirements in 110.12(b).

19           In NA7.7, which is the indoor lighting control  
20 installation requirements, we've removed -- or, yeah,  
21 we've removed the introductory test as it was redundant  
22 to the body of the text in NA7.7.

23           And then again, Section NA7.7.5.2 was removed  
24 and relocated so that the acceptance testing procedures  
25 for verifying that institutional tuning power adjustment



1 factors was in NA7.6.4, so that all the lighting  
2 controls acceptance tests are included in NA7.6.

3 And the power adjustment factor installation  
4 requirements have been retained in NA7.7.5.

5 In NA7.8.1 the outdoor motion sensing control  
6 testing procedures were reorganized to improve the  
7 readability and ease of use of the code.

8 In NA7.8.2 the outdoor photo controls testing  
9 procedures were also reorganized to improve the --  
10 sorry, that's a duplicate. This includes consolidating  
11 the requirements from NA7.8.3 and NA7.8.4. So,  
12 basically just consolidating the requirements.

13 We've also added sampling procedures for larger  
14 projects with more than seven photo controls.

15 In NA7.8.5, the automatic scheduling controls  
16 testing procedures were reorganized to improve the  
17 readability and ease of use of the code. This includes  
18 consolidating the requirements from NA7.8.6 and NA7.8.7.

19 In NA7.13.2 we've added new testing procedures  
20 to verify compressed air monitoring systems in  
21 accordance to the proposed mandatory requirements for  
22 compressed air systems in Section 120.6(e)3.

23 In NA7.18.1 we've added a requirement to verify  
24 that the installed heat recovery ventilation or energy  
25 recovery ventilation equipment in multifamily dwelling

1 units is Home Ventilating Institute certified.

2           We've added a new subsection, NA7.18.3, for  
3 field verification of multifamily central ventilation  
4 duct system duct leakage, in accordance to proposed new  
5 mandatory requirements for central ventilation duct  
6 sealing.

7           We've also added a new subsection, NA7.18.4, for  
8 field verification of heat recovery ventilation or  
9 energy recovery ventilation systems serving multiple  
10 dwelling units, in accordance to new proposed  
11 requirements in Section 170.2(c)3(b)4.

12

13           A new subsection, NA7.19 was added and includes  
14 testing procedures to verify steam trap fault detection  
15 systems in accordance to new proposed mandatory  
16 requirements in Section 120.6(d)3.

17           And a new subsection, NA7.20, was added and  
18 includes testing procedures to verify operation of gas  
19 cooler control for transcritical CO2 systems in  
20 accordance to proposed mandatory requirements in Section  
21 120.6(a) and 120.6(b).

22           And that is the end of the changes to NA7. We  
23 can open it up to questions.

24           MR. BOZORGCHAMI: Thank you, Haile. Thank you,  
25 Daniel.

1 I don't see any participants raising their hands  
2 in the participation side or I don't even see any Q&As  
3 coming in.

4 If we don't that's okay, but we do encourage you  
5 to submit your comments or questions in writing to us,  
6 to our docket, 21-BSTD-01.

7 But if we don't, Commissioner, I think we have  
8 time to do the last presentation today, too, before our  
9 lunch break.

10 COMMISSIONER MCALLISTER: Yeah, that all sounds  
11 great. And, yeah, we'll want to just make sure we get  
12 enough time for people to --

13 MR. BOZORGCHAMI: Sure.

14 COMMISSIONER MCALLISTER: -- as they have really  
15 about the whole three days of hearings. And if we have  
16 next steps that we need to lay out a little more  
17 explicitly, we should do that.

18 MR. BOZORGCHAMI: Sure.

19 COMMISSIONER MCALLISTER: All right, but yeah,  
20 let's keep moving forward if we don't have questions.

21 MR. BOZORGCHAMI: Sure. So --

22 MR. WICHERT: Do you want me to share my screen,  
23 Payam?

24 MR. BOZORGCHAMI: Yes, please.

25 MR. WICHERT: I think I'm next, right.

1 MR. BOZORGCHAMI: Yes, please.

2 MR. WICHERT: Okay. Does that look okay?  
3 Payam, can you see my presentation?

4 MR. BOZORGCHAMI: Yes, you're good.

5 MR. WICHERT: Okay. All right. Good morning  
6 everyone. I'm RJ Wichert and I'm a Mechanical Engineer  
7 in the Building Standards Office. Today I'll be  
8 presenting on the proposed changes to the Alternative  
9 Calculation Method Approval Manual. And I appreciate  
10 that I'm the last presentation between everyone and the  
11 Memorial Day weekend, so I'll try to make this as  
12 efficient as possible.

13 First I want to give some background on this  
14 manual. The Alternative Calculation Method Approval  
15 Manual sets the requirements and procedures for  
16 approving alternative calculation methods, also known as  
17 ACMs or compliance software.

18 The ACM approval manual is often confused with  
19 the residential and nonresidential ACM reference  
20 manuals. But these reference manuals, unlike the  
21 approval manual, are nonregulatory and developed and  
22 approved by the CEC at a business meeting after adoption  
23 of the Energy Code.

24 The reference manuals go into details and rules  
25 covering compliance software building and performance

1 modeling. And unlike the ACM approval manual, the  
2 reference manuals are updated as needed throughout the  
3 code cycle.

4 We're not proposing substantial changes to the  
5 ACM approval manual, but we do have one change in 45-day  
6 language and another we're considering for 15-day  
7 language that we'd like to present today.

8 The below language cleanups are in Section  
9 1.1.5, which cover the requirements for alternative  
10 nonresidential simulation engines.

11 Now, for some background, the simulation engine  
12 is the part of compliance software that does the actual  
13 building energy calculations. An alternative simulation  
14 engine is a third-party compliance software --  
15 compliance program which uses a different building  
16 simulation engine than CBEC Com, which uses Energy Plus.

17 And these language cleanups are intended to  
18 clarify the requirements for integrating the CBEC Com  
19 Compliance Manager and to ensure that third-party  
20 software adheres to CEC-developed rule sets, and  
21 schemas, and submits compliant data to the CEC's report  
22 generator.

23 Now, the black underlined and struck out changes  
24 are in the 45-day language, and the red changes are  
25 being considered for the 15-day language to correct an

1 error we found after posting the 45-day language.

2 That's it. We also, you know, welcome any  
3 comments or any other clarifications anyone finds that  
4 we can make in 15-day language. But otherwise, that's  
5 all I have. Any questions?

6 MR. BOZORGCHAMI: I don't see any raised -- I  
7 don't see any raised hand. And I saw a comment in  
8 question and answer that come from Gina Rodda saying,  
9 yes, so I'm not sure -- oh, there she is, she's raising  
10 her hand.

11 MR. WICHERT: Okay.

12 MS. RODDA: Hello, this is Gina Rodda. Can you  
13 hear me?

14 MR. BOZORGCHAMI: Yes.

15 MS. RODDA: Okay, this is Gina Rodda from Gabel  
16 Energy.

17 MR. WICHERT: Hi Gina.

18 MS. RODDA: And you just were so fast, so which  
19 is why I tried to get the yes in there to make sure I  
20 can -- the question I have was regarding the submit  
21 compliant data to the Energy Commission. Is that once  
22 the report generator is developed or is it something  
23 that's in line with the new schemas and rule sets that  
24 are associated with 2022?

25 MR. WICHERT: Both. So, we just wanted to

1 clarify that we expect third-party software to integrate  
2 and submit compliant data to our report generators. And  
3 then that also means once the schemas are done and that  
4 report generator that uses schemas is developed and  
5 running, we want them to integrate with that, too. So,  
6 we just wanted to clarify because before it was just,  
7 you know, integrate. And so, we're just trying to make  
8 it more clear what we expect from that previous  
9 language.

10 MS. RODDA: So, this is not anything to do with  
11 the data registry?

12 MR. WICHERT: No. No, no.

13 MS. RODDA: Thank you.

14 MR. BOZORGCHAMI: Thank you, RJ. Thank you,  
15 Gina.

16 MR. WICHERT: Yeah.

17 MR. BOZORGCHAMI: I don't see any more raised  
18 hands or any questions/answers in the Q&A box.

19 MR. WICHERT: You want me to stop sharing now  
20 and hand it over to someone?

21 MR. BOZORGCHAMI: Yeah. Well, I apologize,  
22 folks, we need to take a five-minute break, if it's  
23 possible. We may be able to do a quick update  
24 presentation on JA7. Stay tuned one second and I'll be  
25 right back. Thank you.

1 (Off the record at 10:57 a.m.)

2 (On the record at 11:00 a.m.)

3 MR. BOZORGCHAMI: Can you guys hear me?

4 COMMISSIONER MCALLISTER: Yes.

5 MR. BOZORGCHAMI: Okay, wonderful.

6 Commissioner, I think what we're going to do, I think we  
7 need to extend the -- since you have a little bit of  
8 time, can we extend a little bit here and present on JA7  
9 a little bit more in depth right now? Joe Loyer, a  
10 Senior Mechanical Engineer with the Standards Compliance  
11 Office could do that, and we have the slides ready, if  
12 you're okay with that.

13 COMMISSIONER MCALLISTER: That sounds great,  
14 yeah.

15 MR. BOZORGCHAMI: Okay. And I apologize for the  
16 confusion. But Joe has those. He's just getting ready  
17 to set up and I'm hoping it will be 15 minutes.

18 And then, what we'll do with those slides, we'll  
19 attach them to the end of the complete package and we'll  
20 put a note in the slide that Mikey presented that more  
21 details go to the end of the PowerPoint and they'll be  
22 there.

23 COMMISSIONER MCALLISTER: So, sorry I didn't  
24 quite understand. Are we going to start in 15 minutes  
25 or it will take 15 minutes?



1 MR. BOZORGCHAMI: No, no, no, it will take a  
2 about 15 minutes to present.

3 COMMISSIONER MCALLISTER: Oh, okay, great. Oh,  
4 there's Joe. Okay, perfect.

5 MR. LOYER: Sorry, I'm just getting it done  
6 here. Let's see. Oh, that's not what I want to do.  
7 And let's see, I should have it.

8 All right, can you see reference appendices,  
9 joint appendices JA7?

10 MR. BOZORGCHAMI: Yes. Yes, we can.

11 MR. LOYER: All right. And I've just got to get  
12 that out of the way there.

13 Okay, sorry about this little, pushing this  
14 around a little bit, everybody. I am Joy Loyer, a  
15 Senior Mechanical Engineer from the California Energy  
16 Commission. I've been asked to go through what are my  
17 original slides. These, Mikey basically took my  
18 original slides and condensed them down to fit better in  
19 his presentation. But I guess there are some points  
20 that we want to go over again in a little more detail.  
21 So, these may differ slightly from Mikey's slides, but  
22 they are -- they are basically the same presentation.

23 So, moving on.

24 MR. BOZORGCHAMI: Joe, I'm sorry for jumping in  
25 here. Can you go into present mode?

1 MR. LOYER: Am I not?

2 MR. BOZORGCHAMI: I think you are, but it's --  
3 okay, it's just more condensed that's all.

4 MR. LOYER: Okay.

5 MR. BOZORGCHAMI: It's okay, go ahead.

6 MR. LOYER: We're good? Okay.

7 MR. BOZORGCHAMI: Yeah, we can see it.

8 MR. LOYER: Okay. So, JA7.1, the purpose and  
9 scope, staff has identified several additional changes  
10 for JA7 that it deemed necessary for clarity. However,  
11 those changes were too late to be included in the 45-day  
12 language. They will be included in the 15-day language.

13 And in addition, if I may say off my script,  
14 yeah, we will be reaching out to the affected parties  
15 for the HERS providers and any other stakeholders that  
16 are affected by these changes, primarily going to be the  
17 HERS providers, but anybody would be welcome to those  
18 discussions.

19 So, the Compliance Registration Packages is an  
20 existing term in JA7 and is added to this section, to  
21 Section 7.1 for clarity.

22 Commission compliance document repository is an  
23 existing term in JA7 and is the correct term to use  
24 instead of document repository. This change is meant  
25 for clarity only.

1           The requirement (i) is added to ensure that the  
2 Energy Commission staff has access to the data registry  
3 information so that they can perform necessary program  
4 oversight and investigation of complaints. (i) is a  
5 searchable database to be used by the Energy Commission  
6 staff under their provisions for access to the data  
7 registry, Registered Compliance Documents, and their  
8 associated data.

9           I think that was a term of art that we used  
10 early on that probably needs some work.

11           The original DRRM reference implied that the  
12 DRRM had not been approved by the Energy Commission.  
13 This was an oversight from earlier Energy Code cycle  
14 that was corrected for clarity.

15           Let's move on now. So, the Section 7.2  
16 definitions, this is one of two slides here. The new  
17 terms, application program interface, API, was added to  
18 provide a new means of data transfer to or from a data  
19 registry.

20           Compliance Registration Package is the original  
21 and the original intent of this term was to identify the  
22 transmission packages from an outside source to the data  
23 registry, such as an EDDS.

24           This term was modified slightly to include  
25 transmission packages from a data registry as well as to

1 a data registry.

2           The nonresidential data registry was modified to  
3 exclude nonresidential certificates of acceptance that  
4 are reported by an ATTCP. And ATTCP stands for  
5 acceptance test technician certification provider.

6           And the new term, EDDS provider was added to  
7 distinguish between the EDDS service and the  
8 administrator of that service.

9           Registration document. The correction to the  
10 registered compliance, this is being corrected to  
11 Registered Compliance Document. So, it includes a new  
12 direct reference to data validation using the XML schema  
13 provided by the Energy Commission, and an updated  
14 reference to the DRRM.

15           Registration was updated to reference the term  
16 Compliance Registration Package for clarity.

17           Registration provider was updated with the  
18 corrected reference to the DRRM.

19           And other grammatical corrections include  
20 authorized user. The user name was two words and is  
21 converted into one word, username.

22           And field technician, we deleted a comma.

23           All changes to Section 7.3 are for clarification  
24 only. They include the updated DRRM reference,  
25 reference to the term Compliance Registration Package,

1 and minor grammatical edits, leading caps for Registered  
2 Compliance Documents which is a defined term, thus  
3 requiring leading caps.

4           Similar to JA7.3, the changes in Section 7.4  
5 that are for clarification only include the updated DRRM  
6 reference, references to the term Compliance  
7 Registration Package, and minor grammatical edits,  
8 leading caps again and correcting a reference to the XML  
9 schema.

10           A new requirement within Section 7.4.1, the  
11 Energy Commission has required data registries to  
12 provide the Energy Commission staff with access to the  
13 data registries. However, no explicit requirements were  
14 ever provided regarding the level of scope of access.  
15 These new requirements provide that level of detail for  
16 clarity and program oversight.

17           And, of course, this is going to be one of those  
18 things that we are definitely going to be discussing  
19 with the HERS providers to make sure that first and  
20 foremost this can be done, and second that they agree  
21 with this level of access that we are asking for, and we  
22 will be sharing that language with them.

23           The Energy Commission access to the data  
24 registry shall include a search function which returns a  
25 summary electronic reports that may be saved and printed

1 to the Energy Commission with no limit on size.

2           One of our major problems right now is that the  
3 Energy Commission access to the data registries is very  
4 limited. We do have to make a lot of concessions along  
5 these lines to try -- when we want to try and find some  
6 information in regards to an investigation we're  
7 performing, or to answer a question that we may have  
8 from a variety of different sources. It is very  
9 difficult for us to actually get that information from  
10 the data registries with these restrictions. So, we do  
11 need to talk about that with the providers.

12           The registration provider shall submit a list of  
13 all users' accounts at the JA7.4, including name and  
14 contact information, with user IDs and passwords  
15 annually.

16           We do need to know about this. This has come up  
17 more often than we would care for to have HERS raters  
18 that are registered in both HERS providers and to  
19 resolve some of those issues or to actually highlight  
20 some of those problems. We would like to have this  
21 information sent to us on an annual basis so that we can  
22 check.

23           The SRs shall be included in all the following  
24 filters, date range, code compliance cycle, project  
25 location, authorized user, and compliance document.

1           Each summary report shall have a list of all  
2 projects which meet the search criteria and include the  
3 following information, the project name, the project  
4 address, the authority having jurisdiction, which is  
5 typically the building department, the project code  
6 compliance year, a list of all compliance documents  
7 associated with the project.

8           Each summary report shall also include the  
9 ability to download all records for a single project  
10 listed on a single report.

11           Each summary report shall include the ability to  
12 download all records for all projects listed on a  
13 summary report.

14           So, this is -- and I kind of hope I'm getting  
15 some -- I can't really tell right now because of the way  
16 my screen is set up, but I hope that Russ and the other  
17 HERS providers are prepared to give me some questions on  
18 this.

19           MR. BOZORGCHAMI: Okay, thank you, Joe.

20           MR. LOYER: I've still got a couple slides to go  
21 here.

22           MR. BOZORGCHAMI: I know. Yeah, okay.

23           MR. LOYER: So, continuing on, JA7.4.8 is a new  
24 section intended to provide the Energy Commission staff  
25 with the sufficient authority to collect data from the

1 data registry for oversight and complaint investigation.  
2 At any time, Commission staff may request access to  
3 those documents and associated Compliance Registration  
4 Packages that a registration provider is required to  
5 maintain pursuant to Title 24 Part 1, Title 24 Part 6,  
6 or Appendix JA7. Upon receipt of a request for access,  
7 a registration provider shall provide Commission staff  
8 with copies of, or access to those documents and  
9 associated Compliance Registration Package specified in  
10 the request within 30 days of the receipt of the  
11 request, unless granted an extension by Commission  
12 staff.

13           If a registration provider fails to provide  
14 Commission staff with copies of, or access to those  
15 documents, and associated Compliance Registration  
16 Package, the registration shall explain in writing,  
17 fully and concisely, the basis for their failure to  
18 provide access or copies of those documents, and  
19 associated Compliance Registration Package.

20           This is basically almost exactly what the  
21 language is in this Section 7.4.8.

22           If a registration provider fails to comply with  
23 this or any other provision in JA7, Commission staff may  
24 initiate a review of the registration provider's data  
25 registry approval pursuant to JA7.8.4.2.



1           Changes in Section 7.5 that are for  
2 clarification only include the updated DRRM and  
3 reference to the term Compliance Registration Package.

4           JA7.5.6.1.2 originally stated that  
5 nonresidential compliance document registration is not  
6 effective until January 1, 2025. This reference has no  
7 regulatory effect and is deleted.

8           JA7.5.6.2, revision control. The original  
9 requirement was to allow data for obsolete versions of  
10 registered compliance documents not to be retained in  
11 the data registry. Staff has determined that the Energy  
12 Commission should be advised regarding obsolete data and  
13 compliance documents for purposes of program oversight.

14           Therefore, this change requires the data  
15 registry to retain the data associated with obsolete  
16 Registered Compliance Documents.

17           And then, the minor grammatical edits include  
18 leading caps for Registered Compliance Documents. And  
19 that's the end of that.

20           The changes in 7.6 that are clarification only  
21 include the updated DRRM reference, reference to the  
22 term Compliance Registration Package, restriction from  
23 registering a nonresidential certificate of acceptance  
24 that is recorded by an ATTCP. Requiring data validation  
25 to reference the XML schema approved by the Energy

1 Commission. And minor grammatical edits, including lead  
2 caps.

3           The changes in Section 7.7 that are for  
4 clarification only include JA7.7.1.2.1. It discusses  
5 the means by which an EDDS may upload data to the data  
6 registry. Minor changes were made to add API as one of  
7 those options.

8           The updated DRRM reference is included. The  
9 reference to Compliance Registration Package, requiring  
10 data validation to reference the XML schema, and then  
11 minor grammatical edits.

12           And it's only a few more, I promise. The  
13 changes in Section 7.7 that are for clarification only  
14 include JA7.7.1.2.1 -- oh, I'm on the wrong one. There  
15 we go.

16           The changes in 7.8 that are for clarification  
17 only include the updated DRRM reference. JA7.8.2.6  
18 discusses the means by which an EDDS may upload data to  
19 the data registry. Minor changes were made to add API  
20 as one of those options.

21           JA7.8.4.1 is the procedure to initiate  
22 deactivation of a data registry. This change clarifies  
23 that the executive director may initiate this process at  
24 any time upon petition, or recommendation by Energy  
25 Commission staff.

1           JA7.8.5 clarifies that the data registry user  
2 manual requirements can be satisfied using online help  
3 screens in the user interface that do not need to be  
4 published separately.

5           JA7.8.5.5 clarifies that if the EDDS user  
6 instructions contain proprietary information, then these  
7 instructions do not need to be included in the data  
8 registry user manual. However, they must be made  
9 available to all authorized users of that EDDS. And  
10 then, minor grammatical edits.

11           And I believe this is my last slide here. Yep.  
12 This is a new requirement. This is Section 7.8.2.7.  
13 This is a new requirement all registration provider  
14 applicants shall document all quality assurance actions  
15 taken over the last three years of operation as part of  
16 their registration provider application.

17           This shall include complete documentation of all  
18 investigations performed by the registration provider  
19 pertaining to HERS rater performance ratings, field of  
20 verification, diagnostic testing report, provider  
21 performance, and any remedies if applicable. And  
22 complete documentation of all investigations performed  
23 by the Energy Commission staff pursuant to either Joint  
24 Appendix JA7 or the HERS regulations.

25           Failure to provide and accurate documentation,

1 as specified, shall be grounds for denial of  
2 registration provider application.

3 That is probably the most significant add to the  
4 -- to JA7. And I believe that is the last slide here.  
5 Yeah, this is on to questions. So.

6 MR. BOZORGCHAMI: Thank you, Joe, for jumping  
7 in.

8 MR. LOYER: Uh-hum. It looks like I got three.

9 MR. BOZORGCHAMI: I don't have any raised hand,  
10 but we have -- I think we have three questions and  
11 answers. Peter?

12 MR. STRAIT: Sure. Starting at the top, Shelby  
13 Gatlin asks: Is it intended that the new search  
14 mandates and reporting requirements apply to 2022 Code  
15 and forward?

16 MR. LOYER: I'll go ahead and answer that. Yes,  
17 absolutely. This is not a riffraff of code. The Energy  
18 Commission code is always from the adoption and  
19 implementation date forward.

20 MR. STRAIT: Now, I would add to that a lot of  
21 these changes I believe are clarifying in nature, so  
22 there may be areas, if there were misunderstandings  
23 about what is currently required that these might seem  
24 to be changes where it's simply making more evident the  
25 way we interpret the regulations as they exist today,

1 correct?

2 MR. LOYER: It can be, yes. If they're  
3 clarifying in that regard, yes. We have, for the  
4 purpose of clarifying comments, we have had the habit of  
5 allowing those to be the rule going forward, even before  
6 the rulemaking is finalized.

7 MR. STRAIT: Shelby also asks: There seem to be  
8 some substantial financial costs associated with these  
9 new mandates. Have staff considered any of these  
10 financial costs on the HERS program and homeowners?

11 MR. LOYER: So, the substantial financial costs  
12 to the HERS provider, we're not sure exactly what those  
13 are which is one of the questions that we will have in  
14 speaking to the HERS providers about these new  
15 additions.

16 MR. STRAIT: Jim Hodgson representing CHEERS  
17 states: The search filtering requirements described  
18 will be very difficult to incorporate given the  
19 complexity of the existing schema and how the forms  
20 interrelate.

21 Do we want to speak to that at all?

22 MR. LOYER: We're not sure that that's the case,  
23 but we would like to talk to Jim about his concerns and  
24 find out exactly what would be the barriers to getting  
25 staff more access to the data registries than what we

1 have now.

2 MR. BOZORGCHAMI: Thank you, Peter. Thank you,  
3 Joe.

4 We have one raised hand. I'm going to unmute  
5 you, and go ahead and state your affiliation. I'm  
6 sorry. Go ahead, you have to unmute yourself from your  
7 side. There you go.

8 MS. WHITE: Lorraine White, California Energy  
9 Commission, Standards Compliance Office. I want to make  
10 one clarification. Under Title 20 there is a current  
11 requirement that staff have access to the databases  
12 operated by a HERS provider, and that we have full  
13 access to the information contained within those  
14 databases.

15 There is also an existing retention requirement  
16 for quality assurance investigations, and investigations  
17 by HERS providers.

18 So, the goal here is to reflect those current  
19 requirements and necessary expansions of some of those  
20 requirements in Title 24, rather than just have them by  
21 reference in Title 20.

22 MR. BOZORGCHAMI: Thank you for the  
23 clarification, Lorraine. And I apologize, I did not --  
24 although, I should have that about that, sorry.

25 MS. WHITE: No worries.

1 MR. BOZORGCHAMI: So, I'm going to promote you  
2 to panelist now.

3 MS. WHITE: No worries. Thank you.

4 MR. BOZORGCHAMI: I don't see any more comments.  
5 I don't see any more questions. I don't see any more  
6 participants raising their hands, Commissioner.

7 So, if it's okay with you, I would like to open  
8 it up for complete comment of what everyone's heard  
9 today and see if we could get any more comments and  
10 concerns, or questions.

11 If not, I'm also going to post -- I'm showing  
12 the slide that has the information needed, if you wanted  
13 to submit your comments in writing.

14 So, if it's okay with you, I'm going to open it  
15 up for anybody that has any --

16 COMMISSIONER MCALLISTER: Yah.

17 MR. BOZORGCHAMI: -- comments they would like to  
18 discuss.

19 COMMISSIONER MCALLISTER: That sounds great to  
20 me. So, we're moving into just the most open comment  
21 period that we have, sort of bat and cleanup here on  
22 really the whole week's hearings.

23 I don't think we're seeing the slide with that  
24 information on it.

25 MR. BOZORGCHAMI: Yeah, I'm the worst -- I'm

1 sorry, I'm the worst multitasker, I'm sorry.

2 COMMISSIONER MCALLISTER: No worries, we're  
3 seeing it now. Thanks.

4 So, yeah, I'd just encourage people, everyone,  
5 attendees to -- now is your time to ask verbal  
6 questions, but certainly submit comments and, you know,  
7 get in touch with the appropriate staff if you have  
8 additional questions, clarifying questions.

9 And I think the takeaways in terms of follow up  
10 with various commenters today, hopefully, everybody, the  
11 appropriate staff has gotten that down and we can  
12 iterate on the issues that have come up quickly here, in  
13 the next coming few days, in, you know, a week or two.

14 MR. BOZORGCHAMI: That would be great. Thank  
15 you.

16 Right now we have Bob Raymer raised his hand.  
17 So, I'm going to unmute you, sir. And please state your  
18 name and affiliation.

19 MR. RAYMER: Great. Thank you, Payam. This is  
20 Bob Raymer with the California Building Industry  
21 Association.

22 And I just wanted to say thank you to the staff,  
23 and especially Commissioner McAllister. You know, while  
24 we haven't always agreed on everything, it's been great  
25 working with you guys this time around.



1           And we're fully aware of the time and sort of  
2 stressful situation that you've been under. Every now  
3 and then there's a lot of differing views coming your  
4 way and you're doing a heck of a good job to kind of  
5 ferret through these. And we won't be waiting until  
6 June 21st.

7           Our plan, we're getting comments in from ConSol  
8 next week. And our plan is to have written comments  
9 regarding community solar, ducts and conditioned area,  
10 and whatever other minor tweaks ConSol finds. We'd like  
11 to have those to you Monday or Tuesday, the 7th or 8th  
12 of June. So, once again thank you very much.

13           MR. BOZORGCHAMI: Thank you, Bob, that would be  
14 great.

15           Also, Nehemiah, go ahead and state your name and  
16 your affiliation, please.

17           MR. STONE: Yeah, Nehemiah Stone, Stone Energy  
18 Associates. I, too, want to thank you. And I  
19 particularly want to thank you for at this point finally  
20 addressing multifamily as its own building type. It has  
21 been somewhat difficult for some folks in the industry  
22 to have to deal with this building type as somewhat  
23 nonresidential, somewhat residential, particularly in  
24 cases where both 3-story and 4-story multifamily  
25 buildings are built together. And I really appreciate

1 the fact that the Commission has taken on this  
2 tremendous effort to get it right at this point. So,  
3 thank you very much.

4 COMMISSIONER MCALLISTER: Thanks. I want to  
5 step in there and actually say back at you, Nehemiah, I  
6 mean you've been a real stalwart in the multifamily  
7 space for longer than many of us have probably --  
8 remember. I remember, but helping us understand what  
9 that barrier looked and how we might go about solving  
10 it, you know, you played a big role in that. So,  
11 thanks, thanks for your advocacy on that front.

12 MR. STONE: You're welcome.

13 MR. BOZORGCHAMI: Thank you, Nehemiah.

14 Gina, you have your hand raised. I'm going to  
15 unmute you. Go ahead and state your name and  
16 affiliation, please.

17 MS. RODDA: Hello, this is Gina Rodda from Gabel  
18 Energy, again. I just want to tack on to Nehemiah's  
19 comment and Commissioner McAllister's comment. I'm also  
20 looking forward to seeing what we can do to help  
21 multifamily with our software options and the forms  
22 associated with multifamily to continue the efforts  
23 we've seen with the standards' revised language. Thank  
24 you.

25 MR. BOZORGCHAMI: Thank you, Gina. That work's

1 still a work in progress and, hopefully, we'll have  
2 something else soon.

3 Folks, it's open mic, please, or submit a Q&A.

4 MR. STRAIT: We have -- so, that was Joe Loyer's  
5 brief presentation of the JA7 materials. Do we have any  
6 other presentations we want to line up before lunch?

7 MR. BOZORGCHAMI: No, that's it, Peter. And  
8 we're ahead of schedule by a few hours. And so, if  
9 we're not getting any more comments or concerns, I just  
10 want to give everybody a thank you.

11 And also, let everybody know that our tentative  
12 date to get the 15-day language out on the street is  
13 July 8th. So, just imagine how much work has to be  
14 still happening here at the Energy Commission so to get  
15 the language out for you guys to review. So, if you  
16 guys could submit your comments to us sooner, I beg you,  
17 the easier and less cumbersome that is for us. And we  
18 could actually do a due diligence of really digging deep  
19 and trying to resolve the issues to get a better set of  
20 standards out there.

21 So, Commissioner, would you like to give the  
22 closing remarks? And this will end our 45-day hearings  
23 for the 2022 Code cycle.

24 COMMISSIONER MCALLISTER: Yeah. Well, I have  
25 enjoyed the three days and I really appreciate the

1 stakeholders. We still have 91 stakeholders with us, so  
2 thank you for being with us here until the bitter end of  
3 the hearings.

4           And really, I think it's been very productive.  
5 You know, there's a lot of content and necessarily, you  
6 know, not every single detail is in there. But I think  
7 having stakeholders get a heads up of the changes and so  
8 that, you know, each person can bring their expertise  
9 and really go through the language with a fine-toothed  
10 comb, and with critical perspective to make sure that  
11 it's clear, and it's doing -- and, you know, that you  
12 understand it so you can comment, you know, sort of on  
13 the specific changes you might want or points you might  
14 make about it. That's all critical. And it needs to  
15 happen here pretty fast.

16           Because as we keep saying, we are in the formal  
17 rulemaking. And so, you know, on the docket and with  
18 specific interactions with staff and stakeholders is the  
19 way we get it all dialed in so that we can get to 15-day  
20 language with, you know, something very close to the  
21 final standards. That's the way the process needs to  
22 work from here on out.

23           I just want to thank all the staff. I mean  
24 you've seen a couple dozen staff here through the course  
25 of the week, Monday, Thursday and today. And I just, I

1 want to thank all the stakeholders.

2 But by name, really, Payam, Mazi, Peter Strait,  
3 Michael Shewmaker, Cheng Moua, Danny Tam, Haile Bucaneg,  
4 Danny Wong, and Joe Loyer, Simon Lee, Javier Perez,  
5 Peter Petty, Che Geiser, Jimmy Qaqundah, thank you.  
6 Matt Chalmers and Adrian Ownby. And Will Vicent, who  
7 oversees our Building Standards Office, and really is  
8 behind the scenes doing a lot of lifting.

9 And in addition, also behind the scenes Danuta  
10 Drozdowicz -- Drozdowicz, sorry, Alanna Torres, Hillary  
11 Weitze, Kerry Chochli (phonetic).

12 So, and thanks also to Tajanee Ford-Whelan.  
13 Thank you very much for all your support  
14 administratively. And then my Advisor, Bill Pennington  
15 as well.

16 So, thanks all you guys, really appreciate it.

17 MR. BOZORGCHAMI: Thank you, Commissioner. And  
18 also the CASE team and the stakeholders, you guys did a  
19 fabulous job of helping us out this code cycle.

20 COMMISSIONER MCALLISTER: Yeah, it really does  
21 take more than a village here, it really takes a whole  
22 city.

23 And, you know, I'll wax a little, you know,  
24 nostalgic -- or, a little more poetic here. You know,  
25 California's a big, diverse state. You know, as Payam

1 has shown all three days, we've got 16 climate zones,  
2 incredible diversity, incredible cultural diversity, and  
3 incredible richness of, you know, different communities  
4 and community groups. Also have a lot of challenges in  
5 terms of equity. We have a housing crisis. We've got  
6 to build more housing, more affordable housing, more and  
7 better affordable housing.

8           And so, you know, apart from the building  
9 standards we are actually coordinating across agencies  
10 in a much more integrated way than I think historically.  
11 The housing agencies, and other environmental agencies,  
12 in addition to the four energy agencies. And I think  
13 that is -- you know, our problems are also related  
14 organically as well.

15           So, I think, you know, we all have to be up to  
16 the challenge to communicate across silos in ways that  
17 we haven't, you know, even recently. You know, really,  
18 the climate crisis does make that vital.

19           So, you know, the code is a kind of a core  
20 foundation for a lot of the work to influence our  
21 building stock going forward. And I think going forward  
22 we do need to pay more attention to existing buildings  
23 and how we can have the code be more relevant for those.  
24 So, the next cycle, you know, hopefully we'll be able to  
25 dig into that quite a bit.

1           But anyway, I get ahead of us here. We're  
2 talking about the 2022 update and lots of details to go  
3 through, still a lot of process.

4           We're aiming, as Payam has said, we're aiming at  
5 the August business meeting to adopt, but a lot of  
6 milestones have to be met between now and then.

7           So, I want to just encourage people again to  
8 quickly iterate on any remaining questions around this  
9 code, and also engage if it's relevant for you, engage  
10 on the environmental impact report, the discussion for  
11 which is upcoming in the coming weeks as well. So,  
12 that's also a critical piece that needs to get to the  
13 August business meeting.

14           So, with that I just again want to thank  
15 everyone and say, you know, until the next time we talk  
16 about this and certainly, again, want to encourage  
17 everyone to engage going forward.

18           So, with that, I think there's the information  
19 about final deadline for written comments.

20           And anything else, Payam, that you wanted to  
21 sign off with?

22           MR. BOZORGCHAMI: No. I wanted to thank you all  
23 for participating and sticking through this three days  
24 of hearings. And, hopefully, we get your comments soon.  
25 Thank you.

1           COMMISSIONER MCALLISTER:  Thanks everyone.  
2           (Thereupon, the Workshop was adjourned at  
3           11:35 a.m.)

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

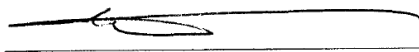


**REPORTER'S CERTIFICATE**

I do hereby certify that the testimony in the foregoing hearing was taken at the time and place therein stated; that the testimony of said witnesses were reported by me, a certified electronic court reporter and a disinterested person, and was under my supervision thereafter transcribed into typewriting.

And I further certify that I am not of counsel or attorney for either or any of the parties to said hearing nor in any way interested in the outcome of the cause named in said caption.

IN WITNESS WHEREOF, I have hereunto set my hand this 7th day of July, 2021.



---

PETER PETTY  
CER\*\*D-493  
Notary Public

**TRANSCRIBER'S CERTIFICATE**

I do hereby certify that the testimony in the foregoing hearing was taken at the time and place therein stated; that the testimony of said witnesses were transcribed by me, a certified transcriber.

And I further certify that I am not of counsel or attorney for either or any of the parties to said hearing nor in any way interested in the outcome of the cause named in said caption.

IN WITNESS WHEREOF, I have hereunto set my hand this 7th day of July, 2021.



---

Barbara Little  
Certified Transcriber  
AAERT No. CET\*\*D-520