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BEFORE THE
CALIFORNIA ENERGY COMMISSION

In the matter of, } ) Docket No. 21-BSTD-01

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

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

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

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

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

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

And please, state your name and your affiliation.

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

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

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

And also, if you do not want to submit a verbal comment to us today, you can also submit your comments by docketing it to our docket. And I’ll provide that information to you in a later slide. But we need your
comments for today’s hearing sooner, within the week or
two from today that will be the best.

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

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

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

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

So, as Payam said, sooner is better than later. If there’s any iteration required or any sort of clarification required, then that would give us time to work through it so that everyone’s clear on any changes
that do take place within the 45-day period, in preparation for the 15-day. And the further we get down that path, the more difficult it is to kind of dial things in properly. So, that is good.

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

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

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

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

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

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

So, thanks again everyone for your participation. Thank you to Payam and staff across the board for all the effort and the diligence that’s gone into what we have in front of us. This really has
involved dozens and dozens of staff in the Commission, and even more stakeholders than that. So, really, it does take this group effort to make it implementable and the best thing for California, which is the ultimate goal. So, thanks to everyone again.

I’ll pass it back to you, Payam.

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

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

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

We may be -- I’m trying to not be the barrier between you and the three-day weekend that’s coming here, starting this afternoon for some of us. So, we may be able to push some of the reference appendices discussions, Joint Appendix before lunch. But we do
have a hard stop today at 11:45 and we will reconvene at
1:15 again. Commissioner McAllister has another
appointment that he has to attend to and he will do
that, and then we could restart after a longer lunch
break today than we did in the past two hearings.

And then, we’ll just jump into the Residential
Appendix, Nonresidential Appendix, and the ACM Approval
Manual.

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

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

The Energy Code is developed to reduce the
wasteful, uneconomic, inefficient and unnecessary
consumption of energy. This Act was signed into law in
1974 by Governor Ronald Reagan. And the Energy
Commission was launched under Governor Jerry Brown in
1975, with the appointment of the first five
And the Commission immediately set out to meet the extensive mandates of the Warren-Alquist Act, including the adoption of the first Building Efficiency Standards that went into effect in 1978.

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

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

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

California is divided into 16 climate zones based on the heating degree days and cooling degree days. Where in IECC I believe California is divided...
into only four climate zones. IECC has California, Death Valley and Sacramento in the same climatic zone, Climate Zone 3, which really does not make sense for us here.

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

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

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

The Energy Commission staff took those into consideration. And from those we had 18 staff workshops here at the Energy Commission to propose the final measures that the Energy Commission thought it would be worth going forward for in 2022.
Energy Commission also did receive proposals to be considered for the 2022 Energy Codes from other entities. The two entities were California Energy Alliance, and also a company named Vertiv.

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

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

On the next slide here, I would like to show you the schedule as we’re moving forward. Right now, today being May 28th, being the last day of the three-day hearings on the 45-day express terms, as Commissioner McAllister earlier said, we would like to have your
comments for these hearings sooner than later. We really have a lot to do and we really want to do the right thing and get the right message out through our codes and standards.

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

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

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

On this slide, and this is probably the only slide you’ll see on the environmental impact report. The environmental impact report has a different proceeding, it has a different schedule. Currently, the environmental impact report is in the public comment
period. And the public comment period ends on July 8th, on this document.

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

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

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

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

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

The link below is the Energy Commission Title 24 link. At this, here you could find the latest set of
compliance manuals, compliance documents, the set of the latest compliance codes, and all the information you need from 2019 and what’s being proposed for 2022, and more of the historical codes.

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

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

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

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

With that, any questions? So, if there’s no
questions, I apologize you’re going to have to hear me again on the Subchapter 1, for All Occupancy. This is the general provisions for all parts of Title 24, Part 6 and all building types.

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

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

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

In Section 100.1, the definitions and rules of constructions, we updated and added the references to industry standards to reference the latest set of documents. We do this every code cycle. We have to evaluate the ANSI ASME. Anything that we refer to we have to update, and evaluate, and look at the latest and
the greatest that’s out on those requirements.

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

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

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

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

Again, this is a section that also is required
for all occupancy types. So, what we did, we updated a
few of the -- for Section 110.2, the mandatory
requirements for solar space -- requirements for space
conditioning equipments, we updated a few of the minimal
efficiency tables to line up with what ASHRAE 90.1 2019
has.

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

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

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

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

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

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

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

In Section 110.9, the mandatory requirements for lighting controls. We received stakeholder comments during the lighting code cleanup efforts and it was requested for us to remove the part night outdoor lighting controls from the standards. This technology is in the marketplace, but there’s no requirements for
when it needs to be installed. So, systems out there, but there’s no real regulations of when to install this. So, we decided, all right, we need to do some cleanup and remove that out.

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

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

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

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

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

MR. STRAIT: If there aren’t any raised hands, I have two questions in the Q&A box.
MR. BOZORGCHAMI: Okay.

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

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

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

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

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

MR. BUCANEG: Good morning, this is Haile with the California Energy Commission. Like Payam said, we are trying to take advantage of equipment that’s being used here in California. So, some of the tables that we’re looking at included are efficiencies for floor-mounted air conditioning system, direct expansion,
dedicated outside air system efficiency tables, so those
type of things that are in 90.1.

MR. BOZORGCHAMI: Thank you, Haile.

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

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

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

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

So, I’m happy to provide -- you know, to work
with Haile and explain a little bit more about that, the
effort in detail. But I did want to flag that those metrics may be changing in 90.1 to reflect a newer test procedure.

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

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

MR. BOZORGCHAMI: Okay.

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

MR. BOZORGCHAMI: Okay. So, I think we need to talk about that offline a little bit because we may have -- we probably need to talk to our legal team about that, too, and see if we can do that. Because if that table is adopted and listed after our adoption here at
the Energy Commission, it may not work. So, we’ve got
to figure this one out.

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

MR. BOZORGCHAMI: Okay.

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

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

MS. PETRILLO-GROH: Thanks.

MR. BOZORGCHAMI: Thank you.

Any more comments, questions, concerns? If not,
I’m going to hand -- pretty much hand the baton over to
Haile, Haile Bucaneg, and he will talk about Article 1.

This is Part 1 of Title 24, Chapter 10.

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

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

Before I start, I would like to thank the
Standards Compliance Office for helping to put together
changes in this section, and Joe Loyer, who is on the
call to help us answer any questions that may come up regarding this section.

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

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

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

The definition for nonresidential data registry has been modified to exclude the nonresidential certificates of acceptance recording by the acceptance test technician certification provider, the ATTCP. This is to avoid duplicate forms registration and the
associated cost should the Energy Commission approve a
nonresidential data registry.

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

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

Moving on to Section 10-103, this section
provides permit certificate informational and
enforcement requirements for designers, installers,
buidlers, manufacturers and suppliers.

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

These changes are needed to clarify the intent
of regulations and provide a reasonable path to
compliance for HERS providers and other interested
Additionally, minor modifications were made to exclude acceptance test recorded by ATTCPs from the nonresidential data registry document registration procedures. Again, this is to prevent duplicate registration of a single document in both the existing ATTCPs and potential nonresidential data registry.

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

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

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

The ATTCP have always provided this database system. The intent is to make those existing database
systems a requirement for future ATTCP applications.

This new section also requires the ATTCPs to submit
specific project data and documents to Energy Commission
using an application program interface, to be adopted by
the Energy Commission. This is intended to be a means
for the Energy Commission staff to gather information
for complaint investigations and general oversight of
the ATTCPs individually, and ATTCP program as a whole.

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

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

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

This is intended to use the ATI system to
transfer all compliance data and documents from the
ATTCPs to an approved Energy Commission repository. And
at this time, the Energy Commission has not approved a
nonresidential repository, yet.

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

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

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

The necessary findings include the Energy
Commission approval of a data schema for nonresidential
compliance documents and a determination that the Energy
Commission will not lose access to the information
necessary to support the enforcement and development of
These requirements provide the following: It allows the Energy Commission to reject any nonresidential data registry application submitted until the Energy Commission formally makes these findings. And it restricts any section in the Energy Commission from establishing a set date as to when the Energy Commission must make these findings. And it reaffirms that any registration provider may only use data schemas approved by the Commission.

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

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

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

The changes in Section 10-115 were previously discussed by staff in earlier presentations, so I won’t
be going into the changes today.

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

MR. BOZORGCHAMI: Thank you, Haile.

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

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

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

MR. BOZORGCHAMI: Go ahead, Joe.

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

So, record in this context is left up to the Energy Commission and the ATTCPs to actually, truly establish what exactly that means. But at this point
we’re not closing the door on it, meaning as much as recording in terms of the XML schemas and the actual data. But we are also allowing the ATTCPs to simply record the static picture of the PDF. By the time the ATTCPs actually do see these documents, they are already created. Well, if everybody does what they’re supposed to they are already -- these documents are already created. They are approved by the local jurisdiction. And they should be static forms at that point. So, a static reporting of those forms is sufficient for the time being.

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

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

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

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

MR. BOZORGCHAMI: Gina, the proposed language for the 15-day language will be as soon as June 21st comes around and we capture all the comments that we’ve received, staff is going to be working on the 15-day
language. And we have a short turnaround. I want to say about a week, a week and a half to turn those around and start the 15-day process.

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

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

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

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

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

MR. QAQUNDAH: Yeah.

MR. BOZORGCHAMI: Okay.

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

MR. BOZORGCHAMI: Okay. So, yeah, Laura, let’s you and I be in communications and we could maybe have a discussion of the tables that are going to be
implemented and what’s going to impact manufacturers.

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

MR. BOZORGCHAMI: Okay. I don’t see any raised hand or any comments, questions in the Q&A window. So, with that I mean it’s -- it’s only an hour. Should we take a ten-minute break and then have Michael Shewmaker and Danny Tam get ready to present on the joint appendices? That was supposed to be presented this afternoon, but since we don’t have any comments and we’re ahead of schedule let’s move it up, so we could get you guys out for a three-day weekend sooner.

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

MR. BOZORGCHAMI: Okay.

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

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

COMMISSIONER MCALLISTER: Okay, thanks everyone.

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

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

MR. BOZORGCHAMI: I think we should start. And I think I’m going to choose Mikey -- excuse me. His name is Mikey is in the office. But Michael Shewmaker
and Danny Tam, who will be presenting the changes for
the joint appendices, which is part of the reference
appendices. Thank you. Go ahead, Mikey.

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

MR. BOZORGCHAMI: Yes.

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

MR. BOZORGCHAMI: Thank you, Commissioner.

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

MR. BOZORGCHAMI: Yes.

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

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

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

Additionally, we removed a few documents that
were either no longer available or no longer being referenced within the code.

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

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

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

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

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

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

And a lot of the information that you’re going to hear in this section was covered earlier by my
colleague, Haile Bucaneg. So, I apologize, some of this might be a little bit repetitive.

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

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

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

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

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

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

And finally, in the registration provider
language we updated the reference to the data registry
requirements manual.

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

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

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

In JA7.4.8, this is a new section for 2022 that
covers Energy Commission oversight of the data
registration providers. Some of the new requirements
include Commission access to Compliance Registration
Packages within 30 days of request, as well as a
requirement for registration providers to explain the
basis in writing if they are unable to comply.

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

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

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

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

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

In JA7.7, we added the API data transference option, and updated references to the data registry requirements manual. And then, for 15-day language we plan to add references to the Compliance Registration Package.
Package, as well as add some language regarding XML data transference to the Commission compliance document repository.

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

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

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

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

In JA7.8.5.5 we added language clarifying that EDDS proprietary information can be excluded from the data registry user manual. However, the EDDS user instruction must be made available to all authorized users that use the EDDS service or software.
And lastly, for 15-day language we plan to add a new section, JA7.8.2.7 which would be titled “Record of Quality Assurance Action Taken” and will include the following requirements: It will require a three-year record of quality assurance actions taken, as well as a record of all investigations and remedies, and a record of all Energy Commission initiated investigation.

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

MR. BOZORGCHAMI: Mikey, one second.

MR. SHEWMAKER: Yes.

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

COMMISSIONER MCALLISTER: Yes.

MR. BOZORGCHAMI: Okay. Okay, we’re good.

Thank you.

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

I’ll be presenting the rest of the JA changes.

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

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

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

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

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

The language for solar assessment tool has also
been cleaned up and included a list of functions for CEC approval.

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

So, we also clarified that the minimum roundtrip of efficiency, it’s a prescriptive requirement only.

For performance, you would model the actual roundtrip efficiency.

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

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

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

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

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

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

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

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

Oh, it looks like Payam might be having some technical difficulties. I’ll go ahead and go through
the Q&A box then.

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

MR. STRAIT: Oh, no worries.

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

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

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

MR. BOZORGCHAMI: Sure.

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

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

MR. STRAIT: Gina Rodda asks: For JA11 can we add a procedure that supports the documentation
requirements for when the exception of PV is used, the
less than 80 square feet with 70 percent or greater
solar access? Building departments are struggling with
how to verify that this is true at plan check.

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

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

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

MR. BOZORGCHAMI: Okay.

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

MR. BOZORGCHAMI: I think what it is, I think
we’ll add some bullets to that one slide for JA7 prior
to posting it to our docket, just for clarity purposes.
MR. STRAIT: Sure. And all of the express terms are available on the docket currently, also.

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

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

MS. GATLIN: Can you hear me.

MR. BOZORGCHAMI: Yes.

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

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

MS. GATLIN: Okay.
MR. BOZORGCHAMI: I don’t have a timeline right now.

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

MR. BOZORGCHAMI: Okay.

MS. GATLIN: Thank you.

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

You’re muted, sir, I’m sorry. Commissioner, you’re still muted.

COMMISSIONER MCALLISTER: Okay, can you hear me now?

MR. BOZORGCHAMI: Yes.

COMMISSIONER MCALLISTER: Okay, I got it. Okay, there’s too many microphones.

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

MR. BOZORGCHAMI: Sure.
COMMISSIONER MCALLISTER: Those details are going to matter. And obviously, you know, I think the right people are on the call right now, but I just want to encourage people to have quick iteration and also together with counsel to make sure we’re doing that properly.

MR. BOZORGCHAMI: Definitely. Yeah, absolutely.

COMMISSIONER MCALLISTER: Okay.

MR. BOZORGCHAMI: Thank you.

COMMISSIONER MCALLISTER: Sure. Thanks.

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

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

MR. BOZORGCHAMI: Perfect.

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

First revisions were made to the 2022
residential appendices to incorporate the VCHP compliance options. That’s the variable capacity heat pump compliance option that was approved back in 2019. So, this compliance option has been effective, but was approved after the 2019 cycle was adopted so, therefore, it was not incorporated in the 2019 documents. So, basically, the language from the compliance option staff report was simply brought over to the 2022 residential appendices.

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

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

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

RA3.7.4.4, the protocol for HRV/ERV performance verification was added to include HRV/ERV recovery efficiency and fan efficacy of a compliance metric. And this provides verification for the new 2022 standards
heat recovery and fan efficacy requirements. But no
revisions are expected for the 15-day language to this
section, to clarify that the fan efficacy is calculated
based on the wattage and the air flow ratings listed in
the CEC-approved directory.

So, RA3.8, field verification of diagnostic
testing of air leakage was updated to incorporate the
procedures in the most recent version of RESNET 380.
So, this was updated from version 2016 to version 2019.

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

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

With a few minor edits to envelope-related
items, RA3.5.6.1, SPF, spray polyurethane foam thermal
specification was updated to clarify that R-values must
be certified with the Department of Consumer Affairs,
Bureau of Electronic and Appliance Repair, Home
Furnishings and Thermal Insulation.

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

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

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

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

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

MR. STRAIT: Okay.

MR. BOZORGCHAMI: Go ahead, Laura.

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

Looking at the JA14, can you tell me a little
bit more about the though process behind the need to introduce an additional test procedure for the products?

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

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

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

MR. TAM: Payam, I was muted.

MR. BOZORGCHAMI: Oh.

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

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

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

MR. TAM: And, yeah, to be clear this is not a mandatory or prescriptive requirement. It’s strictly
voluntary. We have a prescriptive option for central heat pump water heat, which does not require J14 certification. So, this is really, you know, if you want to have your product modeled we need, you know, some data. So, this is why we want to adopt J14.

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

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

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

MR. TAM: Yeah, understand.
MS. PETRILLO-GROH: Okay.

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

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

MR. TAM: Okay, thanks.

MR. BOZORGCHAMI: Thank you.

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

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

MR. MOUA: Yeah, we did receive those comments
and we’re having ongoing internal discussions on that.
And I’ll get back to you on that one, Russ. But
definitely we received those comments and we’re working
on it.

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

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

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

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

MR. BUCANEG: Sure, I’m okay to present on this.

We want to -- Daniel, are you on? I just want to make
sure that we have --

MR. BOZORGCHAMI: Sure.

COMMISSIONER MCALLISTER: Let me just say, this
is Commissioner McAllister, I just want to chime in.
So, that discussion was great that we had just now. I
kind of felt like there might be some percolation still
out there, so I just want to invite us to be flexible in
terms of later on in the day if people want to circle
back to that and ask additional questions that would be okay. I just want to make sure that the right staff remains on the line for that.

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

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

MR. WONG: Yeah, this is Daniel Wong.

MR. BUCANEG: Okay, perfect.

MR. WONG: I’m ready.

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

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

Starting off here, first up in NA1. There were some updated changes to the nonresidential HERS verification testing and documentation procedures. In NA1.1 updates pertain to new duct leakage requirements and tables for kitchen range hoods. This is included -- this includes references in Table NA1.1 to NA2.2.4.1.4.
for kitchen range hoods and NA2.2.4.1.5 for heat
recovery ventilation or energy recovery ventilation systems.

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

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

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

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

In NA2.2.4.1.2 and 2.2.4.1.5 updates were made to include HRV and ERV recovery efficiency and fan efficacy as compliance metrics. It should be noted that additional changes to NA2.2.4.1.5 are expected and this is to clarify that fan efficacy is calculated -- is a calculated value based on watts and air flow ratings listed in the CEC-approved directory.
Finally, in NA2.2.4.1.4 updates to include capture efficiency as a compliance metric were made. For field verification and diagnostic testing of multifamily dwelling units in NA2.3 updates were made to incorporate the most recent version of RESNET Standards 380.

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

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

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

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

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

MR. BUCANEG: Yes, but we can -- oh, there you
MR. BOZORGCHAMI: Yeah, we can see your screen.

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

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

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

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

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

Also, we’ve added clarification to the testing procedures for secondary sidelit daylit zones, and
Finally, we’ve added an alternative partial daylight test to address stakeholder concerns with the feasibility of using the existing partial daylight test in all conditions, particularly in daylit spaces with dark glazing or small window areas.

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

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

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

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

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

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

We’ve also revised and updated the procedures to improve clarity and consistency.

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

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

And then again, Section NA7.7.5.2 was removed and relocated so that the acceptance testing procedures for verifying that institutional tuning power adjustment
factors was in NA7.6.4, so that all the lighting
controls acceptance tests are included in NA7.6.

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

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

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

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

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

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

In NA7.18.1 we’ve added a requirement to verify
that the installed heat recovery ventilation or energy
recovery ventilation equipment in multifamily dwelling
units is Home Ventilating Institute certified.

We’ve added a new subsection, NA7.18.3, for
field verification of multifamily central ventilation
duct system duct leakage, in accordance to proposed new
mandatory requirements for central ventilation duct
sealing.

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

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

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

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

MR. BOZORGCHAMI: Thank you, Haile. Thank you,
Daniel.
I don’t see any participants raising their hands in the participation side or I don’t even see any Q&As coming in.

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

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

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

MR. BOZORGCHAMI: Sure.

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

MR. BOZORGCHAMI: Sure.

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

MR. BOZORGCHAMI: Sure. So --

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

MR. BOZORGCHAMI: Yes, please.

MR. WICHERT: I think I’m next, right.
MR. BOZORGCHAMI: Yes, please.

MR. WICHERT: Okay. Does that look okay?

Payam, can you see my presentation?

MR. BOZORGCHAMI: Yes, you’re good.

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

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

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

The reference manuals go into details and rules covering compliance software building and performance
modeling. And unlike the ACM approval manual, the
reference manuals are updated as needed throughout the
code cycle.

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

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

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

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

Now, the black underlined and struck out changes
are in the 45-day language, and the red changes are
being considered for the 15-day language to correct an
error we found after posting the 45-day language.

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

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

MR. WICHERT: Okay.

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

MR. BOZORGCHAMI: Yes.

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

MR. WICHERT: Hi Gina.

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

MR. WICHERT: Both. So, we just wanted to
clarify that we expect third-party software to integrate
and submit compliant data to our report generators. And
then that also means once the schemas are done and that
report generator that uses schemas is developed and
running, we want them to integrate with that, too. So,
we just wanted to clarify because before it was just,
you know, integrate. And so, we’re just trying to make
it more clear what we expect from that previous
language.

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

MR. WICHERT: No. No, no.

MS. RODDA: Thank you.

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

MR. WICHERT: Yeah.

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

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

MR. BOZORGCHAMI: Yeah. Well, I apologize,
folks, we need to take a five-minute break, if it’s
possible. We may be able to do a quick update
presentation on JA7. Stay tuned one second and I’ll be
right back. Thank you.
(Off the record at 10:57 a.m.)
(On the record at 11:00 a.m.)

MR. BOZORGCHAMI: Can you guys hear me?

COMMISSIONER MCALLISTER: Yes.

MR. BOZORGCHAMI: Okay, wonderful.

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

COMMISSIONER MCALLISTER: That sounds great, yeah.

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

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

COMMISSIONER MCALLISTER: So, sorry I didn’t quite understand. Are we going to start in 15 minutes or it will take 15 minutes?
MR. BOZORGCHAMI: No, no, no, it will take a  
about 15 minutes to present.

COMMISSIONER MCALLISTER: Oh, okay, great. Oh,  
there’s Joe. Okay, perfect.

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

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

MR. BOZORGCHAMI: Yes. Yes, we can.

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

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

So, moving on.

MR. BOZORGCHAMI: Joe, I’m sorry for jumping in  
here. Can you go into present mode?
MR. LOYER: Am I not?

MR. BOZORGCHAMI: I think you are, but it’s --
ookay, it’s just more condensed that’s all.

MR. LOYER: Okay.

MR. BOZORGCHAMI: It’s okay, go ahead.

MR. LOYER: We’re good? Okay.

MR. BOZORGCHAMI: Yeah, we can see it.

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

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

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

Commission compliance document repository is an
existing term in JA7 and is the correct term to use
instead of document repository. This change is meant
for clarity only.
The requirement (i) is added to ensure that the Energy Commission staff has access to the data registry information so that they can perform necessary program oversight and investigation of complaints. (i) is a searchable database to be used by the Energy Commission staff under their provisions for access to the data registry, Registered Compliance Documents, and their associated data.

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

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

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

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

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

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

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

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

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

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

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

And field technician, we deleted a comma.

All changes to Section 7.3 are for clarification only. They include the updated DRRM reference,
and minor grammatical edits, leading caps for Registered
Compliance Documents which is a defined term, thus
requiring leading caps.

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

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

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

The Energy Commission access to the data
registry shall include a search function which returns a
summary electronic reports that may be saved and printed
to the Energy Commission with no limit on size.

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

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

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

The SRs shall be included in all the following filters, date range, code compliance cycle, project location, authorized user, and compliance document.
Each summary report shall have a list of all projects which meet the search criteria and include the following information, the project name, the project address, the authority having jurisdiction, which is typically the building department, the project code compliance year, a list of all compliance documents associated with the project.

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

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

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

MR. BOZORGCHAMI: Okay, thank you, Joe.

MR. LOYER: I’ve still got a couple slides to go here.

MR. BOZORGCHAMI: I know. Yeah, okay.

MR. LOYER: So, continuing on, JA7.4.8 is a new section intended to provide the Energy Commission staff with the sufficient authority to collect data from the
data registry for oversight and complaint investigation. At any time, Commission staff may request access to those documents and associated Compliance Registration Packages that a registration provider is required to maintain pursuant to Title 24 Part 1, Title 24 Part 6, or Appendix JA7. Upon receipt of a request for access, a registration provider shall provide Commission staff with copies of, or access to those documents and associated Compliance Registration Package specified in the request within 30 days of the receipt of the request, unless granted an extension by Commission staff.

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

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

If a registration provider fails to comply with this or any other provision in JA7, Commission staff may initiate a review of the registration provider’s data registry approval pursuant to JA7.8.4.2.
Changes in Section 7.5 that are for clarification only include the updated DRRM and reference to the term Compliance Registration Package.

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

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

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

And then, the minor grammatical edits include leading caps for Registered Compliance Documents. And that’s the end of that.

The changes in 7.6 that are clarification only include the updated DRRM reference, reference to the term Compliance Registration Package, restriction from registering a nonresidential certificate of acceptance that is recorded by an ATTCP. Requiring data validation to reference the XML schema approved by the Energy Commission.
Commission. And minor grammatical edits, including lead caps.

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

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

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

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

JA7.8.4.1 is the procedure to initiate deactivation of a data registry. This change clarifies that the executive director may initiate this process at any time upon petition, or recommendation by Energy Commission staff.
JA7.8.5 clarifies that the data registry user manual requirements can be satisfied using online help screens in the user interface that do not need to be published separately.

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

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

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

Failure to provide and accurate documentation,
as specified, shall be grounds for denial of
registration provider application.

That is probably the most significant add to the
-- to JA7. And I believe that is the last slide here.

Yeah, this is on to questions. So.

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

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

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

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

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

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

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

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

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

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

Do we want to speak to that at all?

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

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

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

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

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

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

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

MS. WHITE: No worries.
MR. BOZORGCHAMI: So, I’m going to promote you to panelist now.

MS. WHITE: No worries. Thank you.

MR. BOZORGCHAMI: I don’t see any more comments. I don’t see any more questions. I don’t see any more participants raising their hands, Commissioner.

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

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

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

COMMISSIONER MCALLISTER: Yah.

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

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

I don’t think we’re seeing the slide with that information on it.

MR. BOZORGCHAMI: Yeah, I’m the worst -- I’m
sorry, I’m the worst multitasker, I’m sorry.

COMMISSIONER MCALLISTER: No worries, we’re seeing it now. Thanks.

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

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

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

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

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

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

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

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

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

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

MR. STONE: Yeah, Nehemiah Stone, Stone Energy Associates. I, too, want to thank you. And I particularly want to thank you for at this point finally addressing multifamily as its own building type. It has been somewhat difficult for some folks in the industry to have to deal with this building type as somewhat nonresidential, somewhat residential, particularly in cases where both 3-story and 4-story multifamily buildings are built together. And I really appreciate
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the fact that the Commission has taken on this
tremendous effort to get it right at this point. So,
thank you very much.

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

MR. STONE: You’re welcome.

MR. BOZORGCHAMI: Thank you, Nehemiah.

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

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

MR. BOZORGCHAMI: Thank you, Gina. That work’s
still a work in progress and, hopefully, we’ll have
something else soon.

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

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

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

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

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

COMMISSIONER MCALLISTER: Yeah. Well, I have
enjoyed the three days and I really appreciate the
stakeholders. We still have 91 stakeholders with us, so thank you for being with us here until the bitter end of the hearings.

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

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

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

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

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

So, and thanks also to Tajanee Ford-Whelan.

Thank you very much for all your support administratively. And then my Advisor, Bill Pennington as well.

So, thanks all you guys, really appreciate it.

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

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

And, you know, I’ll wax a little, you know, nostalgic -- or, a little more poetic here. You know, California’s a big, diverse state. You know, as Payam
has shown all three days, we’ve got 16 climate zones, incredible diversity, incredible cultural diversity, and incredible richness of, you know, different communities and community groups. Also have a lot of challenges in terms of equity. We have a housing crisis. We’ve got to build more housing, more affordable housing, more and better affordable housing.

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

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

So, you know, the code is a kind of a core foundation for a lot of the work to influence our building stock going forward. And I think going forward we do need to pay more attention to existing buildings and how we can have the code be more relevant for those. So, the next cycle, you know, hopefully we’ll be able to dig into that quite a bit.
But anyway, I get ahead of us here. We’re talking about the 2022 update and lots of details to go through, still a lot of process.

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

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

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

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

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

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

Thank you.
COMMISSIONER McALLISTER: Thanks everyone.

(Thereupon, the Workshop was adjourned at

11:35 a.m.)
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