

DOCKETED

Docket Number:	21-BSTD-03
Project Title:	2022 Rulemaking for Part 11 (CalGreen) and Parts 2-5 of the Building Standards Code
TN #:	239350
Document Title:	Lead Commissioner Hearing
Description:	N/A
Filer:	Tajanee Ford-Whelan
Organization:	Efficiency Division
Submitter Role:	Commission Staff
Submission Date:	8/18/2021 9:43:39 AM
Docketed Date:	8/18/2021

CALIFORNIA ENERGY COMMISSION

In the matter of:

2020 Rulemaking for Part 11) Docket No. 21-BSTD-03
(CALGreen) and Parts 2-5 of)
the Building Standards Code)
_____)

LEAD COMMISSIONER HEARING

REMOTE VIA ZOOM

TUESDAY, JULY 27, 2021

9:00 A.M.

Reported by:

Peter Petty

APPEARANCES

LEAD COMMISSIONER

Andrew McAllister

CEC STAFF

Payam Bozorgchami, Building Standards Office

Danuta Drozdowicz, Building Standards Office

Peter Strait, Building Standards Office

Danny Tam, Building Standards Office

P R O C E E D I N G S

9:05 A.M.

TUESDAY, JULY 27, 2021

MR. BOZORGCHAMI: Good morning everyone.

My name is Payam Bozorgchami, Project Manager for the 2022 Building Energy Efficiency Standards. I want to welcome you to Energy Commission's Lead Commissioner Hearing for the upcoming CALGreen Codes. The Lead Commissioner overseeing the work that's being done for the 2022 CalEnergy Code is Commissioner Andrew McAllister.

This is the only hearing that is going to be held on the 45-day express terms where we would like to receive your comments regarding the proposed language for Part 11, and minor editorials in Parts 2, 2.5, 3, 4, and 5 of Title 24. In this hearing, we will not be discussing the Environmental Impact Report. We've already done that, had a separate hearing, and we're moving on with the environmental impact.

MR. STRAIT: You mean the Environmental Impact Report for the Part 6?

MR. BOZORGCHAMI: For Part 6, yes.

MR. STRAIT: Right.

1 MR. BOZORGCHAMI: For Part 6, exactly.

2 Thanks Peter.

3 MR. STRAIT: Yeah.

4 MR. BOZORGCHAMI: Let's start first with
5 some housekeeping rules.

6 We will be muting everyone. And after
7 each proposed subchapter is presented, you can
8 either raise your hand and we will un-mute you or
9 you can submit your questions in the Q&A window.
10 And we have a group of panelists who will try to
11 answer your question as they come in.

12 Also, if you are participating by phone,
13 you can use star nine to raise your hand and star
14 six to mute and un-mute yourself. One important
15 thing to remember is that when we do un-mute you,
16 you need to sometimes un-mute yourself from your
17 side, too. That's something that a lot of people
18 forget. And when we do un-mute you, please state
19 your name and your affiliation. This workshop is
20 being reported and it will be transcribed. And
21 by stating your name and your affiliation, we can
22 figure if we need to outreach for further
23 discussion, if needed.

24 Also, we are going to implement the
25 three-minute rule today. And we are asking for

1 one speaker per organization to provide comments.
2 But depending on the number of comments that we
3 receive, we may, actually, shorten that three
4 minutes, maybe down to two minutes. We really
5 want to be cognizant to get all your comments and
6 to listen to you folks and see what we can do.

7 But before we start, Commissioner, would
8 you like to give a few words?

9 COMMISSIONER MCALLISTER: Yes, sir.

10 Thank you, Payam.

11 And first of all, I wanted to just thank
12 the whole team from the Building Standards Office
13 and, really, across the Commission. There's so
14 many hands in all the different parts of the
15 Building Energy Code in California. And in this
16 case, for Part 11, it's somewhat more targeted
17 than Part 6. But the Building Standards Office
18 and the Chief Counsel's Office, and the
19 Efficiency Division more broadly, lots of folks
20 with there hands in that -- in this, and you'll
21 see some of them today but not all of them.

22 So just want to thank you, Payam, Will
23 Vicent, the leader of the BSO, the Building
24 Standards Office, Mazi, Peter, Danny, and the
25 whole team you're going to see today. But just

1 know, everyone participating, that there are lots
2 of people behind the faces that you'll see today.

3 So as Payam said, this is about Part 11,
4 the energy part of the CALGreen Code. And so
5 it's not about Part 6, and it's not about the
6 Part 6 Environmental Impact Report. But
7 together, Part 6 and Part 11 are part of a quite
8 intentional and coherent package of activities or
9 group of activities and authorities that the
10 Energy Commission has to move our built
11 environment toward a more environmentally
12 sustainable, energy efficiency, and decarbonized
13 future. And that is really our organizing -- our
14 set of organizing principles in California and
15 has been for decades.

16 So you know, you are all seeing climate
17 change in action every day. We have the fires
18 now. The smoke is settling over much of the
19 state again this year. If you look at the
20 satellites, you know, Oregon has been fire. And
21 the smoke is headed all over the mountain states,
22 up into Canada where there are also fires, and
23 all the way over to the East Coast, it's having
24 impacts in terms of air quality and visibility.

25 So you know, it's clear that this is

1 directly linked to climate change, in the long
2 term, the environmental impacts of climate
3 change. So you know, the deep drought that we're
4 in is not a coincidence. The probabilities and
5 the statistics just point toward linkage here.

6 And so that bigger picture is really just
7 to frame this issue as an urgent one and why we
8 wanted to include in this year's overall Building
9 Code update package something in Part 11 to help
10 pivot our buildings toward decarbonization.

11 And so I think over the course of this
12 day, well, I'll just frame it as I see it, and I
13 think folks who participate and who sort of step
14 back and consider all the various pieces of this,
15 that there is a lot of wisdom to the package as a
16 whole, including Part 6. We did an Environmental
17 Impact Report because some stakeholders asked for
18 it and we felt that it was important to just get
19 out in front of that. And so that's not, again,
20 about what we're talking about today but, you
21 know, I think that it's a statement of how
22 intentional the state is being, the Energy
23 Commission is being, about this year's update for
24 2022.

25 I want to encourage everyone to

1 participate today to the extent you can. You
2 know, verbal comments are more than welcome. If
3 you need more time or -- you know, I'd encourage
4 everyone to be very concise, as concise as
5 possible with their verbal comments today. You
6 don't have to take the whole three minutes but
7 please do, if you need to, absolutely. But
8 written comments are an opportunity to really get
9 into detail if you feel it necessary to do that.

10 This update, I think everyone will see,
11 it's relatively simple. So there, you know, is a
12 lot of setup, there's a fair amount of setup just
13 to set the context here. But, essentially, you
14 know, Part 11 is extending in the residential
15 realm what we did with Part 6. And so I think
16 that there's a really direct relationship here
17 which helps make sense of what we're doing with
18 Part 11. And the nugget of what we're proposing
19 for Part 11 is actually pretty straightforward.
20 And so I actually think there's a lot of
21 opportunity to communicate in a very clear way
22 with the marketplace and all of the folks that we
23 need, you know, that we want to work with in
24 implementation of this going forward.

25 You know, this overall strategy for our

1 buildings to get the decarbonized and efficient
2 in a cost effective and equitable way is
3 extremely, extremely important. And Part 11, in
4 large measure, is kind of aimed at local
5 jurisdictions. You know, this is not anything
6 that we're requiring anyone in the state to do.
7 The folks who would take this and extend it are
8 the local governments who might adopt Part 11 as
9 their own Reach Code, or parts of Part 11, or
10 Part 11 as part of something else, you know,
11 something more broad that they're doing.

12 So this is not, per se, a requirement.
13 This is the part of CALGreen that is, quote
14 unquote, "voluntary," and -- for the most part,
15 but, certainly, the Part 11 piece is voluntary.
16 And so it's really up to the locals. And you
17 know, of course, they have broad authority beyond
18 just their Energy Reach Codes. So anyway, that's
19 the kind of context into which this Part 11
20 conversation is being injected today during this
21 hearing.

22 So again, you know, overall the idea is
23 to really work with the marketplace to help it
24 transition. That includes industry, all the
25 trade allies, you know, all the trades, the

1 advocates, the environmental community, the
2 equity community.

3 I'll kind of just wrap up by saying, you
4 know, everything, virtually everything the
5 Commission is doing in this period of our History
6 is being envisioned, in part or in whole, through
7 an equity lens. We know that if we -- well, we
8 know that we have to bring everyone in the state
9 along with accessible clean energy, and that
10 includes all the environmental benefits, it
11 includes, certainly, the environmental justice
12 benefits, and it includes participation, not just
13 as having access to clean energy but also
14 participating in the clean energy economy.

15 And so we won't talk about that today
16 much in Part 11 but just know that that's a lens
17 at which these initiatives, including Part 11,
18 and all around the Building Code, and many, many
19 other pieces that are outside of the Building
20 Code but related to upgrading our built
21 environment are considered through an equity
22 lens. So I just wanted to make that clear.

23 So with that, I want to just, again,
24 thank everyone for participating. You know, we
25 know that in this day and age, we're all trying

1 to get away from Zoom, so it would be nice to --
2 or at least where we're trying to. You know, it
3 would be nice to be able to do this in three
4 dimensions, at least for some. But I think going
5 forward, you know, we've understood that these
6 remote tools are here with us to stay. And,
7 actually, they reduce the transaction costs for
8 people to participate.

9 And if you have any comments, you know,
10 suggestions for how to improve the process and
11 improve accessibility to these sorts of hearings
12 and our communications with everyone impacted,
13 you know, the public, and also the specific
14 advocates that are participants in the supply
15 chain or marketplace broadly, please make those
16 suggestions. And I would ask that you contact
17 the Public Advisor's Office, Noemi Gallardo and
18 her team here at the Energy Commission, to make
19 any suggestions on the process.

20 But I want to just, again, thank everyone
21 for being here. This is the life blood of the --
22 of getting to good policy is participation and
23 getting everyone's feedback and ideas to that we
24 can make sure that not only in the development of
25 the regulations but also in our implementation

1 afterwards, after adoption, that we do think in
2 the best way possible, so that's the goal. We
3 live in a big, complex, multifaceted, diverse
4 state, and we really do need to hear from all
5 perspective, and so we really appreciate everyone
6 being here.

7 And again, thanks to Staff for putting
8 today together and, really, for all the work
9 behind this and the other pieces of the Building
10 Code update.

11 So with that, looking forward to today,
12 and thanks again.

13 Back to you, Payam. I think you might be
14 muted, Payam.

15 MR. BOZORGCHAMI: Sorry. It happens all
16 the time. I apologize.

17 So what we're going to cover today, Title
18 27, Part 11 sections that are making proposed
19 edits for this Code cycle. And there's parts of
20 Title 24 where we have added pointers related to
21 requirements in the Energy Code. But that we're
22 going to talk right after our break -- we're
23 going to take a break right after Danny Tam, and
24 we do the questions and answers for Part 11.

25 With that, like always, we're going to

1 have to start with a little quick history of how
2 the Energy Commission started.

3 Two California Assemblymen, Charles
4 Warren and Al Alquist, coauthored what is known
5 today as the Warren-Alquist Act. This Act gives
6 authority to the Energy Commission to develop the
7 Energy Code on a triennial basis and local
8 jurisdictions to enforce the Energy Code through
9 the building permit process.

10 This Code, the Energy Code, is really
11 developed to reduce the wasteful, uneconomic,
12 inefficient, and unnecessary consumption of
13 energy. The Act was signed into law in 1974 by
14 Governor Ronald Reagan. And the California
15 Energy Commission was launched by Governor Jerry
16 Brown in 1975 with the appointment of the first
17 five Commissioners. The first Building Energy
18 Efficiency Standards went into effect in 1978.

19 And with that, on -- there was more that
20 happened on later in time. But for now, the
21 benefits of the Energy Code, California has been
22 a national leader in energy efficiency since the
23 late 1970s with an Appliances and Building
24 Standards saving the consumers more than \$100
25 billion in utility bills. I think we're doing

1 something right here.

2 And then within the recent years, in 2007
3 the California Building Standards Commission was
4 directed to develop the Green Building Standards,
5 which was first in the nation, in an effort to
6 meet the requirement of AB 32, that's Assembly
7 Bill 32, which is known as the California Global
8 Warming Solution Act. This Act requires us to
9 reduce the greenhouse gas down to 1990 levels by
10 2020. Notable, AB 32 Scoping Plans identified
11 the buildings as the second largest greenhouse
12 gas emission producers.

13 Subsequent to AB 32, in 2008, Senate Bill
14 1473 gave the California Building Standards
15 Commission the authority to develop the Green
16 Standards for occupancies where no other state
17 agency has the authority to adopt the Green
18 Building Standards. The first CALGreen Code was
19 published in 2008 and implemented in August of
20 2009 as a voluntary set of standards.

21 CALGreen is divided into five divisions
22 and the Energy Standard is part -- is actually
23 not part but, excuse me, is part of Division 2.
24 And in 2010, the CALGreen Code, to reduce the
25 confusion, they separated out the residential

1 requirements from the nonresidential
2 requirements. And these are all, still,
3 voluntary codes. So when it comes to CALGreen,
4 the California Energy Commission does have the
5 authority to develop and adopt voluntary energy
6 provisions which are already located in CALGreen
7 Division 2.

8 So in reality, from the 1970s, we, the
9 California Energy Commission, had the authority
10 to adopt energy codes for California. Now it's
11 part of Part 11 or part of Part 6. That's where
12 the Energy Commission's authority comes into
13 place.

14 For Part 11, this is our time schedule.
15 The effective date is, like any other part of the
16 Title 24, is January 1st of 2023. Right now,
17 today being July 27th, we're having our first and
18 only Lead Commissioner hearing on Part 11. And
19 we're hoping that we get your comments from
20 today's hearing sooner than later. And we're
21 hoping that, if you can, you submit your comments
22 to us by August 10th. Here's the link that you
23 can submit your comments to and if you feel that
24 there's more than needs to be said versus what
25 you're saying today. And here's the link to 21-

1 BSTD-03. This is for Part 11 only. BTSD --
2 excuse me, 21-BSTD-01 is for Part 6. And 21-
3 BSTD-02 is for the EIR for Part 6, and 03 is for
4 Part 11.

5 The second link right there, this is
6 where you could obtain all the information for
7 what we're doing for 2022, what we've done for
8 2019. There's the set of manuals for 2019,
9 there's documentation for 2019 there and, like I
10 said, everything and anything that we're doing
11 for 2022.

12 For today's comment, like I said, we
13 strongly recommend you to submit your comments to
14 our docket log. But if you need to, you could
15 submit it, too, by writing to this address here,
16 715 P Street. We're no longer at 1516 9th
17 Street. The Energy Commission has been moved to
18 the new Natural Resources Building and this is
19 our new address.

20 And for Part 11, the final filing of
21 comments is August 16th, that's what is -- what's
22 been posted on our website, and the hardcopy of
23 the documents are there.

24 That's all I have for now. And so with
25 that, I'm going to pass the baton to my

1 colleague, Danuta, who will introduce herself and
2 Danny Tam to present the proposed changes for
3 Part 11.

4 Danuta?

5 MS. DROZDOWICZ: Thank you. Good
6 morning. My name is Danuta Drozdowicz.

7 Can you switch to the next slide please,
8 Payam? Thank you.

9 And I work in the Building Standards
10 Office of the Commission's Energy Efficiency
11 Department. And I am here with my colleague,
12 also in the Building Standards Office, Danny Tam,
13 to present an overview of the changes that we
14 proposed for Part 11 of the California Building
15 Code.

16 Next slide please.

17 As Payam has explained, CALGreen is a
18 voluntary code that contains a full spectrum of
19 Green Building Standards, among them, Energy
20 Standards that both meet and exceed Part 6 of the
21 California Energy Code. For local jurisdictions
22 that choose to adopt CALGreen, there are both
23 mandatory and voluntary standards throughout the
24 code. For energy, the mandatory requirement is
25 to meet the current Energy Code. The voluntary

1 standards, on the other hand, typically exceed
2 the code and often include requirements that may
3 be cost effective in future code cycles.

4 CEC is responsible for content and
5 updates to the voluntary standards that are
6 contained in CALGreen, Appendices A4 which is for
7 residential buildings and A5 for nonresidential
8 buildings. They have no regulatory effect. And
9 local jurisdictions that adopt CALGreen are not
10 obliged to use them. For 2022, CEC has proposed
11 changes only to A4, the residential appendix.

12 Next slide please.

13 To develop these changes the CEC worked
14 with our stakeholders and, in the process,
15 received one comprehensive proposal from the
16 Codes and Standards Enhancement, or CASE
17 Initiative. In addition to the updates to energy
18 design rating targets that Danny Tam will explain
19 in a moment, we selected four of the measures
20 recommended in the case report as changes to 2022
21 CALGreen.

22 Next slide please.

23 Jurisdictions that decide to adopt the
24 CALGreen voluntary Energy Standards are choosing
25 to meet the energy design rating for their

1 climate zone and, in addition, one prerequisite
2 option. For 2022, we have added four options to
3 the four that you see here that are in the 2019
4 code. The new options are high-performance
5 vertical fenestration, heat pump water heater
6 demand management, battery storage system
7 controls, and heat pump space and water heating.

8 That is my presentation. I'm happy to
9 answer questions but please hold them until the
10 end of this presentation.

11 I am now pleased to turn this over to
12 Danny Tam, who will discuss the changes proposed
13 for the energy design ratings.

14 Thank you.

15 MR. TAM: Next slide please. Hi. Oh,
16 hang on. Let me start the video.

17 Hi. I'm Danny Tam, CEC Staff. I'll be
18 presenting the changes in energy design rating,
19 or EDR.

20 The EDR targets in Part 11 are voluntary
21 Reach performance targets to go beyond the
22 minimum requirement in Part 6. There are some
23 major updates to Part 6 in 2022. The most
24 significant change is that the insulation of
25 either heat pump space heater or heat pump water

1 heater is the proposed prescriptive requirement.
2 This is why it was necessary for us to update the
3 EDR targets to reflect these changes. CEC Staff,
4 in particular Mazi Shirakh, really did the heavy
5 lifting for this analysis.

6 So a little bit of history for 2019 Part
7 11, there were separate targets for Tier 1 and
8 Tier 2. To set the target in 2019, we started
9 with a mixed-fuel house and added a 14-kilowatt-
10 hour battery. For Tier 1 and for Tier 2, we
11 added some additional PV, as well. So for 2022,
12 we're proposing to have a single EDR target
13 instead of two for simplification, and also make
14 it easier for jurisdictions to adopt Tier 2.

15 Another change is that the proposed
16 margins are based on hourly resource energy.
17 This is a new metric we introduced in 2022 for
18 Part 6. Prior to that, we used time dependent
19 valuation, or TDV. TDV worked well for our
20 purposes. And we're still using it for -- in
21 Part 6 with EDR2, together with source energy in
22 EDR1. Since our goal for the cycle is to promote
23 high efficient heat pump technologies, we believe
24 our hourly resource energy is a better metric for
25 Part 11.

1 Next slide.

2 This is the table that shows the proposed
3 EDR margins and some examples of how to meet it
4 for heat pump or mixed-fuel compliance path. On
5 the second column, these are the targets below
6 the requirement in Part 6. This is a change from
7 2019 where the requirement was an absolute target
8 you have to hit. For 2022, these are numbers,
9 you know, improvements from the Part 6
10 requirement. For example, Climate Zone
11 12, let's say your EDR1 in Part 6 is X, you
12 have to be 4.4 below that to meet Part 11.

13 And just to be clear, these examples are
14 not the only way to meet these targets. Since
15 these are performance targets, you can meet them
16 with other measures, such as better insulation or
17 higher efficiency equipment.

18 Let's start with the heat pump compliance
19 path. If you have both heat pump space heater
20 and water heat, that will meet the Part 11 EDR
21 target in most of the climate zones. In the
22 milder climate zones, you have to add a little
23 extra, such as compact hot water distribution or
24 electric cooktop. For Climate Zone 15, this is
25 the Palm Springs desert, we have a very high

1 cooling load and no heating load, so you might
2 have to do triple-pane windows and something
3 else, like electric cooktop.

4 And in the mixed-fuel column, we're
5 basing these examples on double-mixed fuel,
6 meaning minimum efficiency furnace and a minimum
7 efficiency instantaneous gas water heater. So
8 dual-fuel heat pump works great for any climate
9 zones that have high heating loads, such as
10 Climate Zone 1, 2, and 16. Triple-pane windows
11 also works well with these climate zones and
12 others. For the rest of the climate zones the
13 easiest way to meet Part 11 would be to add a
14 five-kilowatt-hour battery storage. And as a
15 note, battery storage will meet Part 11 for all
16 climate zones in either the heat pump or mixed-
17 fuel compliance pathway.

18 And next slide.

19 I think that's all I have. Now we're
20 opening it up for questions.

21 MR. STRAIT: Hold on. Oh, yeah. Go
22 ahead.

23 MR. BOZORGCHAMI: Peter, I, maybe earlier
24 on, misspoke. I just wanted to make sure
25 everybody understands, for this hearing, we

1 prefer to get your comments sooner. August 10th
2 is what we're preferring. But the notice that's
3 out there allows you to submit comments until
4 August 16th. So we're just trying to get your
5 comments in sooner so we could really do a --
6 make a due diligence effort to get the set of
7 standards done appropriately and correctly.
8 We're running out of time and time is of essence
9 right now to us. So that was my main ask.

10 MR. STRAIT: Yeah. And in addition to
11 that, you know, if there are any questions about
12 this presentation, that gives us time to respond
13 to that question while you would still, based on
14 that answer, be able to submit written comments
15 into our docket.

16 MR. BOZORGCHAMI: So with that, any
17 questions or comments regarding what you've heard
18 so far?

19 I think, Commissioner, if it's okay --
20 I'm not seeing any raised hands, and I'm not
21 seeing anything in the chat -- in the question
22 and answer box -- if it's okay, can we forego the
23 break and move on to the next topic?

24 COMMISSIONER MCALLISTER: Let me just --
25 I want to just invite -- I want to acknowledge

1 that there's a lot of information in that table
2 and invite, in subsequent comment periods --
3 let's not close this out. Let's actually allow
4 people to comment about --

5 MR. BOZORGCHAMI: Sure.

6 COMMISSIONER MCALLISTER: -- you know,
7 provide any feedback or sort of impressions that
8 they have if, indeed, they're seeing this for the
9 first time or just, you know, need a little time
10 to consider.

11 And so I want to maybe frame a little bit
12 differently, you know, the ideas that are sort of
13 implicit in this table; right?

14 So what we're trying to do in California,
15 broadly, is move toward buildings that are
16 decarbonized, you know, that have the low-carbon
17 footprint. We know that our electricity system,
18 the cause of SB 100, will be moving, is already
19 moving and will continue to move toward, you
20 know, a highly decarbonized grid. So there's
21 lots of planning and investment that will go on,
22 on that side.

23 And so what we are -- what that leads to
24 is, you know, low-carbon technologies in the
25 building sector. So the reason that heat pumps

1 are a focus is because they are both inherently
2 efficient, and so they meet, really, you know,
3 California's aggressive efficiency goals, and as
4 such, and because they use electricity, they will
5 be increasingly low-carbon. And so that's kind
6 of why heat pumps are in the sweet spot. So many
7 of you on the call, likely, understand that but I
8 just thought it was worth saying.

9 And so this table really embodies, you know,
10 a decarbonization strategy that has both electric
11 and mixed fuel or dual -- mixed fuel, let's call
12 it, building compliance pathways.

13 And so given heat pumps inherent
14 efficiency, they're the fairly -- they're,
15 really, the more straightforward path to
16 implement in virtually every climate zone, except
17 for the ones that really don't have much heating
18 load, in which case, you know, replacing a
19 furnace with a heat pump doesn't get you much.
20 So that's the -- you know, so the electric path
21 is relatively straightforward because heat pumps
22 have such inherent efficiencies and use clean
23 electricity.

24 But if you, you know, a builder or, you
25 know, a custom builder or homeowner wants to

1 preserve the option and include gas in their
2 building, there are pathways to do it, but you
3 need to find equivalent efficient and low-carbon
4 pathways while continuing to use gas. And so
5 that militates towards a little bit more effort
6 and technology in order to do that on the mixed-
7 fuel side.

8 So really there, you know, we're not
9 requiring anything in particular, other than high
10 energy and carbon performance. The beauty of
11 EDR1 is that it embodies both of those things,
12 and so it's an energy metric that aligns with
13 carbon, and so it's perfectly -- you know, it
14 fits perfectly within an Energy Code, but it also
15 aligns well with carbon so it helps California
16 meet its goals and, at the same time, you know,
17 it stays within the bounds of what an Energy Code
18 is.

19 So I wanted to prod out a little bit more
20 color to this so that people can understand, you
21 know, in your climate zone, you know, this is not
22 the extent of the compliance pathways but the
23 essence of it and, illustratively, is here in the
24 table. So anyway, I just wanted to frame that a
25 little bit more for folks in case they need a

1 little more context, but invite everyone to
2 submit comments and questions when they can, when
3 they desire through the course of the day.

4 It looks like we have one.

5 MR. BOZORGCHAMI: Yeah, we do have one
6 comment from Karen -- or one question from Karen
7 Kristiansson, who asks, "Can you please go over
8 the difference between Tier 1 and Tier 2 since
9 they both have the same EDR targets?"

10 MR. STRAIT: All right. Do you want me
11 to speak to this one, Payam?

12 MR. BOZORGCHAMI: Sure, or Danuta, if
13 you'd like to.

14 Go ahead Peter.

15 MR. STRAIT: Sure. So in this Code
16 cycle, what we are doing is we are no longer
17 going to be having separate targets for Tier 1
18 and Tier 2. For these energy provisions, they're
19 all going to be the same, regardless of Tier 1
20 versus Tier 2 adoption at the local level.

21 MR. BOZORGCHAMI: So it will be just one
22 target in this Code cycle then.

23 MR. STRAIT: Yeah.

24 MR. BOZORGCHAMI: There will not be a
25 Tier 2, per se, or Tier 1, it will just be one

1 set target. Thanks Peter.

2 I don't see any other questions in the
3 question and answer. And I don't see any raised
4 hand.

5 Commissioner, if it's okay with you, can
6 we move on to the next topic --

7 COMMISSIONER MCALLISTER: Yeah.

8 MR. BOZORGCHAMI: -- and that is the
9 other parts. And we're going to forego the break.

10 COMMISSIONER MCALLISTER: Yeah. No
11 problem at all.

12 MR. BOZORGCHAMI: Okay.

13 COMMISSIONER MCALLISTER: Yeah. That's
14 fine. Let's forego the break.

15 MR. BOZORGCHAMI: Yeah.

16 COMMISSIONER MCALLISTER: But just,
17 again, I want -- you know, if people need a
18 little time to think about, please do ask
19 questions on this, on the part you've already
20 seen, later, so thanks.

21 Go ahead.

22 MR. BOZORGCHAMI: Peter, go ahead.

23 MR. STRAIT: Certainly. So my name is
24 Peter Strait. I'm the Supervisor of the
25 Standards Development Unit within the Building

1 Standards Office. And I'll be presenting the
2 changes we're proposing to Parts 2, 2.5, 3, 4,
3 and 5 of our Title 24 Building Standards.

4 Next slide please.

5 So what we're adding in these sections
6 are non-substantive pointers. Energy Commission
7 staff worked with staff from the California
8 Department of Housing and Community Development,
9 or HCD, to identify areas in Part 2 through 5
10 that apply to building systems and equipment that
11 were also subject to Efficiency Standards that
12 existed in Part 6. Staff added informative
13 language, and I'm referring to these as
14 "pointers," to make readers aware of applicable
15 standards, and included brief descriptions of
16 said standards where appropriate. These pointers
17 that we're adding to these other sections are not
18 considered substantive because the underlying
19 standard that they refer to is going to apply
20 regardless of the informative language.

21 Lastly, Staff is interested in knowing if
22 there are other areas where similar informative
23 language would be of benefit to you as a reader
24 of this document.

25 So next slide please.

1 So for the Building Code in Part 2, what
2 we added is that we retained references to the
3 California Energy Code that were in Chapters 2
4 and 12, that the model IECC language would have
5 references to IECC Codes. That way the document
6 correctly refers to our Part 6 Energy Code where
7 it needs to. And we also clarified the
8 relationship of our Energy Code climate zones
9 that we have established for California, and the
10 climate zones as are used in the IECC model codes
11 in Chapters 12, 14, 21, and 25. And since this
12 is something we've done in a couple of documents,
13 I'm going to illustrate what these are.

14 Next slide please.

15 So on slide, you can see, this is the
16 IECC Climate Zone Map for California. And you'll
17 notice that the vast majority of the state is
18 this orange color. We're almost entirely within
19 Climate Zone 3, with a few that are a little bit
20 outside of that. But total, we only have these
21 five categories that apply to us.

22 Next slide please.

23 California's climate zones that are used
24 for the Energy Code make metes and balance
25 (phonetic) distinctions based on topographic

1 features in California that have influenced
2 climate. And we have a total of 16 different
3 zones describing different climates that are
4 expected to exist and the impact those will have
5 on the energy use of buildings. So you know,
6 they're not going -- they don't map one-to-one,
7 there's not a direct way to translate between
8 them, but we wanted to make sure that when the
9 term "climate zone" was used, in Part 6 it means
10 this more detailed map, and in other parts that
11 are referring to IECC model language, for example
12 for vapor barriers, it's going to be referring to
13 that simpler IECC map.

14 Next slide please.

15 In the Residential Code, which is Part
16 2.5, we had a similar clarification of the
17 relationship between the Energy Code and IECC
18 climate zones and we added that to Chapters 4, 7,
19 8, as well as Appendix S.

20 Next slide please.

21 In the Electrical Code, which is Part 3,
22 we added a pointer to California-specific local
23 ordinance requirements, and we added that to
24 Article 89. California has some statutory
25 requirements for the adoption of local ordinances

1 that aren't reflected in the model codes, as well
2 as regulations based on those statutes that are
3 in specific parts of the code, so we added those
4 there.

5 We added pointers to new Energy Code
6 electric-ready requirements that we've adopted --
7 that we're proposing to adopt in this Code cycle.
8 We added those pointers in Article 408, Article
9 422, and Article 440.

10 And we also added a pointer to new
11 storage-ready requirements that we're adopting in
12 this Code cycle, and we added those to Article
13 706.

14 Next slide please.

15 Similarly, for the California Mechanical
16 Code, we added pointers to the California-
17 specific local ordinance requirements in Chapter
18 1.

19 We added pointers to Energy Code Air
20 Filter Standards in Chapter 3. Given that the
21 Energy Code is now specifying some things related
22 to air filtration, we wanted to make sure readers
23 of Mechanical Code were aware that there were
24 Energy Code provisions that may apply.

25 Similarly, we pointed to Energy Code duct

1 size requirements and we added that pointer in
2 Chapter 6.

3 And we added a pointer to the Energy Code
4 pipe insulation requirements and slab floor
5 insulation requirements in Chapter 11.

6 Next slide please.

7 Finally, in the California Plumbing Code,
8 we again updated to add a pointer to local
9 ordinance requirements in Chapter 1. This is
10 because Chapter 1 of the Model Codes does refer
11 to local jurisdictions adopting additional
12 requirements above what's in those Model Code
13 provisions. So it's just making sure that that
14 language points to California laws that are going
15 to govern that process.

16 We added pointers to California Water-
17 Related Appliance Standards applicable to
18 plumbing fittings and fixtures in Chapter 4.
19 This isn't strictly a pointer to Part 6, although
20 Part 6 does require that anything regulated as an
21 appliance meets associated Appliance Standards.
22 But this actually refers directly to the Title 20
23 Appliance Efficiency Standards that apply for the
24 state of California.

25 We added pointers to the Energy Code's

1 Water Heating System Standards and we added those
2 in Chapter 5.

3 And then we added a pointer to the Energy
4 Code's Pipe Insulation Standards and we put those
5 in Chapter 6 of the Plumbing Code.

6 And that is all of the changes we're
7 proposing to these other Code sections. Again,
8 these aren't substantive. These aren't creating
9 or applying requirements. They're simply
10 highlighting when an Energy Code requirement
11 exists that relates to that building system.

12 So with that, are there any questions or
13 comments?

14 MR. BOZORGCHAMI: I don't see any raised
15 hands or any questions in the Q&A.

16 MR. STRAIT: Oh. Do we want to open
17 things up for general commentary then?

18 MR. BOZORGCHAMI: I think we should. And
19 I'm going to go to the next slide provide the
20 link to the docket for this hearing, 21-BSTD-03,
21 and please submit your comments.

22 Any comments or questions please?

23 Well, I think with that, I'm going to
24 thank everyone for participating and taking time
25 from your day to be with us here today. And,

1 hopefully, we will get some comments and
2 suggestions in our docket in the next few days,
3 hopefully by August 16th.

4 With that, Commissioner, I would
5 recommend that we adjourn the hearings. Would
6 you like to give --

7 COMMISSIONER MCALLISTER: Sounds good.

8 MR. BOZORGCHAMI: Yes. Go ahead.

9 COMMISSIONER MCALLISTER: Sure. Yeah, so
10 thank you. This was incredibly efficient and
11 thank you for that.

12 I do have a feeling that, you know, there
13 will be some stakeholders who want to digest this
14 and have some back and forth with Staff and I
15 absolutely encourage that. Feel free to contact
16 my office, as well.

17 And you know, I think this is a -- it's a
18 pretty elegant -- you know, there's a lot of
19 information in that table but the concept of it
20 is actually quite elegant at extending the
21 approach, the residential approach, in Part 6 to
22 move the needle a bit more toward decarbonized
23 buildings, quite a bit more, actually, towards
24 decarbonizing new construction, or at least
25 opening up those opportunities, giving local

1 jurisdictions something fairly straightforward
2 and concrete that they can utilize as they see
3 fit to implement those approaches in their
4 particular context, climate zone, jurisdiction.

5 So that's the idea, on a voluntary basis,
6 and then that opens up possibilities for us to
7 keep moving the marketplace in that direction in
8 the future Part 6 of Code cycles. So that's kind
9 of the dynamic and the ecosystem approach that
10 we're taking in California. And so I think,
11 hopefully, its clear how Part 11 2022 fits into
12 that approach.

13 So please do submit your written
14 comments, and sooner is better, as Payam said,
15 and we will keep this moving forward. And
16 there's some directions for how to do that, how
17 to submit your comments on the electronic docket.

18 So with that, appreciate everybody
19 listening in, and thanks again to Staff for
20 putting all of this together. Excellent job.

21 MR. BOZORGCHAMI: Thank you. Thank you
22 everyone.

23 (The workshop concluded at 9:49 a.m.)

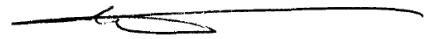
24
25

REPORTER'S CERTIFICATE

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

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

IN WITNESS WHEREOF, I have hereunto set my hand this 9th day of August, 2021.



PETER PETTY
CER**D-493
Notary Public

CERTIFICATE OF TRANSCRIBER

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

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

I certify that the foregoing is a correct transcript, to the best of my ability, from the electronic sound recording of the proceedings in the above-entitled matter.



MARTHA L. NELSON, CERT**367

August 9, 2021