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CALIFORNIA ENERGY COMMISSION

STAFF WORKSHOP

In the Matter of:) Docket No. 15-MISC-02
)
Request for Public Input on the)
Implementation of)
2013 Building Energy Efficiency) RE: Request for Public
Standards) Input
)
_____) STAFF WORKSHOP

CALIFORNIA ENERGY COMMISSION

1516 NINTH STREET

CHARLES IMBRECHT HEARING ROOM

SACRAMENTO, CALIFORNIA

FRIDAY, April 10, 2015

10:00 A.M.

Reported By: Peter Petty

APPEARANCES

Staff Present

Rachel MacDonald, Standards Implementation Office
 Payam Bozorgchami, Building Standards Office
 Todd Ferris, Building Standards Office
 Eurllyne Geiszler, Building Standards Office
 Chris Olvera, Standards Implementation Office
 Bill Pennington, ED Administration
 Mazi Shirakh, Building Standards Office
 Peter Strait, Building Standards Office
 Shawn Pittard, Public Advisor's Office

Also Present (* Via telephone and/or WebEx)

Greg Mahoney, City of Davis, CALBO
 Gene Thomas, Ecology Action
 Cheryl English, Acuity Brands
 V. John White, CEERT
 *Anthony Andreoni, CMUA
 Nehemiah Stone, Benningfield Group, Inc.
 Patrick Splitt, App-Tech
 George Nesbitt, HERS Rater
 Ruben Willmarth, Carrier
 *Mark Costa, The Energy Coalition
 Bruce Sanguinetti, Sierra Eco Systems
 Matthew Christie, CABEC
 *Neil Miller, American Lighting
 Mathew Hargrove, CA Business Properties Association
 *Paul Bony, ClimateMaster
 Yanda Zhang, TRC Energy Service
 *Leslie Kramer, Stanford University
 Chris Doyle, Pacific Ridge Electric, Inc.
 Jon McHugh, McHugh Energy
 Michael Jouaneh, Lutron Electronics
 Christopher Smith, Statewide LMCC
 Mike Bachand, CalCERTS
 Brooklyn Stewart, SmartWatt Energy, Inc.

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

2 APRIL 10, 2015

10:02 A.M.

3 MS. MACDONALD: Good morning and thank you. I
4 can tell everybody on the Web -- if you can hear me. It
5 looks like I'm transmitting okay. I will keep this
6 microphone to my face.

7 My name is Rachel MacDonald and I am with the
8 Standards Implementation Office within the Efficiency
9 Division of the California Energy Commission.

10 And welcome, I have a full room here. Welcome to
11 today's public workshop. It's a request for public input
12 on the ongoing implementation of the 2013 Building and
13 Energy Efficiency Standards. Next slide.

14 So the purpose of today's meeting is the result
15 of Commission direction to work with the public to develop
16 ongoing communications, better improve our communications
17 with the public and seek input as to stakeholder need and
18 our ability to interact and help with ongoing
19 implementation of the 2013s.

20 Today's scope is only on the subject of the 2013s
21 and we want to accept comments. We also have a docket. We
22 have this docket 15-MISC-02. It has comments already
23 publicly posted to it, quite a few. This docket is going
24 to remain open until the 2016s are in place. And it's
25 going to be an ongoing outlet for stakeholders to file

1 comments, input, suggestions, ongoing for staff to review
2 and consider and interact.

3 And as we talk today I'm going to say -- next
4 slide, thank you -- I will preface my standing up here with
5 coming in today and standing in front of you I want to say
6 today's the first time for doing this type of a workshop
7 where we're seeking input to improve an ongoing process.

8 And we generally, in the Standards Implementation
9 Office, want to develop relationships with the public. And
10 we want to better how we interact, and take input, and then
11 how we respond. And what those outlets are and how we're
12 able to work with stakeholders and close that loop and just
13 have better communications in general.

14 I want to sincerely, genuinely state our intent
15 is good. We do work hard. This office works hard and so
16 that's the intent of today, is to improve. So we're kind
17 of feeling our way as we go, literally. As I stand up here
18 I hope to genuinely have a lot of interaction as far as
19 ideas and recommendations to improve these processes.

20 So about the Energy Commission, under the Warren-
21 Alquist Act we have the authority for the Building and
22 Energy Efficiency Standards. They are required to be cost
23 effective and we are required to update them periodically.
24 We have the 2013s. We are in the process of the 2016s, but
25 again I'd just like to remind the scope of today is the

1 2013s and only the 2013 right now. Thank you.

2 So as far as documents go we do have the website.
3 We have the standards posted. We have compliance manuals
4 with the reference appendices and these documents are
5 available online. If you can't find something you can
6 always call us and we can help with that. We are also able
7 to send out hard copies in some instances to members of the
8 public as well. Next.

9 Okay. I want to talk a little bit about
10 resources and things that we do have as internal
11 communication processes that we use to communicate
12 information with the public. And in doing that, I'm going
13 to hand off to my colleague, Chris Olvera. He is the
14 supervisor of the Outreach and Education Office under the
15 Standards Implementation Office. So he's going to talk
16 about these slides.

17 Did you want to come up here and stand or do you
18 want to speak from there?

19 MR. OLVERA: Thank you, Rachel, and good morning
20 everybody. I want to thank you for coming and for everyone
21 online via WebEx. Again, my name is Chris Olvera and we
22 want to talk briefly about some of the resources that are
23 available to help implement the 2013 Energy Standards and
24 also simply compliance and enforcement.

25 So as you see on the slides here is the

1 Blueprint. We publish about every other month since
2 September. We even had a special issue released in
3 December. And what we do is in response to frequently
4 asked questions from stakeholders, specifically on our
5 Energy Standards Hotline we provide articles, we provide
6 Q&A in an attempt to help simplify the Energy Standards and
7 ask the questions that industry and stakeholders are
8 asking.

9 The Blueprint used to be published in hard copy
10 instead of by email, but now you know moving forward, going
11 green, it's sent and published electronically. So if you
12 want to receive the Blueprint you need to sign up on our
13 Listserv and I'll talk about how to do that in the
14 subsequent slides.

15 On the next slide we have another resource: our
16 fact sheets. Fact sheets are similar to Blueprints. The
17 main difference is that usually a fact sheet will focus on
18 one particular requirement or subject. The Blueprint can
19 have various topics that we will discuss. On a fact sheet
20 we go more into the details and down into the weeds.

21 To date for 2013 Standards we've developed and
22 published five. We've published fact sheets regarding the
23 ATTCP, the Acceptance Technician Certification Provider
24 requirements, Lighting Controls, Envelope Sealing and also
25 the nonresidential Lighting Wiring Alteration Requirements.

1 Again, the fact sheets are similar to the
2 Blueprint. You can republish it electronically and we send
3 out on our Listserv, so again you can look at them at the
4 link at the bottom of the slide. But what we'll do is
5 we'll talk about how to set up for the Listserv and receive
6 those automatically when we publish them.

7 Next, training. Many stakeholders ask about
8 training on the 2013 Energy Standards. And there is a lot
9 of training that is available, first through the utilities.
10 They provide training on the 2013 Energy Standards and it's
11 free. The links are provided on our website, so what
12 you'll do is locate a utility, go ahead and go to their
13 website and check out their training link that's on our
14 website and you can see what training is available. These
15 classes do fill up fast, so I strongly recommend that you
16 sign up for your respective utilities Listserv or check
17 their website periodically and you can sign up for those
18 courses.

19 Sometimes utilities, if you contact them
20 directly, and if in particular if you're an enforcement
21 agency and you have a big enough group they may even come
22 out to your facility and provide training. So that is an
23 option.

24 In addition, on our website at the link here on
25 the slide there's CEC training that we provided.

1 Presentations, PDFs, and WebEx recordings of training that
2 we've provided on the -- there's overviews of the 2013
3 changes, CBECC Software training, and also training on the
4 ATTCP Program.

5 Next another resource is the Energy Code Ace.
6 The Energy Code Ace is funded by the utilities under the
7 auspices of the CPUC, the California Public Utilities
8 Commission. The Energy Code Ace, their goal is to simply
9 compliance and enforcement. And a lot of the tools and
10 resources they provide are geared at plans examiners and
11 building inspectors at the enforcement agency level.

12 With that said, they have a forms tool that can
13 be used by either contractors or homeowners where it will
14 ask you certain questions for additions and alterations.
15 And it will identify which forms are required all the way
16 from permit to inspections, so that's a tool that I
17 strongly recommend that you seek out.

18 MR. STRAIT: One thing, we're not sure what's
19 causing the humming. It seems to be some form of feedback.
20 We're going to try to solve that problem, maybe by --

21 (Colloquy regarding audio issues)

22 MR. STRAIT: For those of you on WebEx, please
23 bear with us. We're handling some technical difficulties
24 right now.

25 MR. OLVERA: Hello, can you hear me?

1 UNIDENTIFIED SPEAKERS: Much better.

2 MR. OLVERA: There we go, okay. Sorry about
3 that.

4 Okay. So continuing on with the Energy Code Ace,
5 they also provide free trainings through funding by the
6 utilities. They usually go out upon request, but they also
7 provide in-person training and online. Again, that is
8 free, so we strongly recommend again signing up for their
9 Listserv similar to the utilities. They send out their
10 schedules online, you can you at them, strongly recommend
11 you do that periodically. Or again, if you have a big
12 enough group you can contact them and they may actually
13 come out to you. And again, it will be free of charge.

14 The Energy Code Ace also develops checklists and
15 trigger sheets to assist building departments in
16 identifying why compliance is required. They develop them
17 for permit techs, plans examiners and inspectors. So
18 again, if you're a local enforcement agency or even a
19 builder or contractor strongly recommend you look at these
20 tools, because it'll help you identify when compliance is
21 required and which forms to complete for compliance.

22 Continuing on another resource, compliance
23 software may be used to demonstrate compliance with the
24 Energy Standards. With that said, the software must be
25 approved by the Energy Commission. We do have a list of

1 those approved softwares on our website at the link on the
2 bottom of the slide here. There are Energy Commission
3 approved workarounds that have been posted.

4 Also if you're having issues with the CBECC
5 Software we do have a link through our contractor on the
6 list of approved software page where you can look at
7 submitted issues. There's also some solutions. They have
8 sample forms and sample runs that you can look at, so
9 suggest that if you are having issues with the CBECC
10 Software go to that link and see if your issue has already
11 been reported and see if there's a resolution. If not, you
12 can report that issue and our contractor will work on
13 resolving that or at least notifying it and continuing on
14 from there.

15 Okay. The next resource, HERS providers, HERS
16 testing has been a requirement in Energy Standards I
17 believe since 2001 Energy Standards. Its scope has
18 expanded for 2013. We now have mandatory HERS testing for
19 residential new construction, so with that said a HERS
20 provider must be approved by the Energy Commission to train
21 and certify HERS Raters. And then the HERS Rater who
22 conducts the test, he must be certified through one of
23 those approved providers.

24 A list seen of the approved providers is
25 available on our website at the link on this slide, along

1 with their certifications. And then if you click on any of
2 their respective approved HERS providers you can find a
3 list of certified HERS Raters in your area.

4 Next, another resource is the ATTCP, the
5 acceptance test Technician Certification Providers. This
6 program is new for the 2013 Energy Standards and is
7 applicable to nonresidential lighting and HVAC controls and
8 systems. The ATTCP must be approved by the Energy
9 Commission in order to train and certify the technicians.
10 A list of those providers and their certifications, just
11 like for the HERS Provider Program, is available on our
12 website.

13 And again, if you're looking for a certified
14 technician if you click on any of the respective provider
15 websites you can go on their site and find a technician in
16 your area at the link available at the bottom of this
17 slide.

18 Okay. The Energy Standards Hotline, so I assume
19 many of you are aware of the hotline. But if you are not
20 they are a great resource and tool that you should utilize.
21 We have the Energy Standards Hotline. It is toll free in
22 California at the number listed here, the 1-800 number.
23 They are available Monday through Friday, 8:00 to 12:00
24 noon and 1:00 to 4:30. If you are outside of California
25 you there is a 916 number or if you want you can email them

1 at Title24@energy.ca.gov.

2 Since the implementation of the Energy Standards
3 we have been receiving roughly, on average, about a
4 thousand enquiries per month. So there does appear to be a
5 lot questions and so if you are one of those individuals
6 and you have a question please contact the Energy Standards
7 Hotline and we will respond to your inquiry.

8 Last before I pass it over back to Rachel, the
9 last resource that we have available are the Listservs. So
10 I've been talking about the Listservs in regards to the
11 Blueprint, the fact sheets, and any announcement that we
12 want to communicate to our stakeholders. We do have
13 Listservs available on the link here, on the slide. What I
14 strongly recommend is that you go to the link, and you sign
15 up for the Building Standards, Blueprint and Efficiency
16 Listservs.

17 This is our main conduit for communicating to our
18 stakeholders. What you do is you'll click confirm when you
19 sign up for these Listservs if you have not already done
20 so. And you'll receive a confirmation email. Please
21 respond to that confirmation email within 48 hours and that
22 will finalize your subscription.

23 With that said on our Listservs, we have about a
24 few thousand who are subscribed. We know in the State of
25 California there's about 31 million people, so there's a

1 lot more stakeholders than are on our Listserv. So please,
2 I strongly recommend that you sign up for those main
3 conduits for communicating to stakeholders. And you
4 receive all of our announcement that we send out on them.

5 And that's it for resources. I'm going to pass
6 it back over to Rachel.

7 MS. MACDONALD: Thank you, Chris.

8 Okay. At this time we're going to get into
9 public comments, the reason that everyone is here.

10 I will note we'll start with people on the phone
11 -- we are going to start with individuals in the room
12 first, and we'll get to phone comments. And then we ask
13 that you limit your comments to three minutes. I know
14 individuals have multiple issues they'd like to address,
15 and so in doing that three minutes per issue please.

16 And also, really important, please submit your
17 comments in writing to the docket, so that they're formally
18 on the record.

19 We are recording this via WebEx and we also have
20 a court reporter here too, so there will be transcripts
21 available. But please, it's just really helpful if you
22 post to the docket as well.

23 So we have a podium in the room, does anyone like
24 to start?

25 Great, thank you.

1 MR. MAHONEY: I'll start, Greg Mahoney, City of
2 Davis, representing CALBO. And first of all, I want to
3 express my unwavering support of energy efficiency. I
4 teach Energy Code at Cosumnes River College and for other
5 organizations as well.

6 And what I want to express today is kind of a
7 common sentiment among code users the Energy Code is
8 unnecessarily complicated. And to demonstrate that I will
9 select just the simplest project that we require a permit
10 for that also requires Energy Code compliance. And that's
11 water heater change outs.

12 And so I sat down to develop a handout and when
13 going through the code -- I don't know if you can see all
14 those little stickies -- there's about seven different code
15 sections that I have to refer to, to determine the
16 requirements for a water heater change out. And even after
17 going through all that it was still unclear to me, some of
18 the requirements, so I contacted the Energy Commission
19 staff. And after a week or so of emails back and forth and
20 several phone calls, although some of the things were
21 clarified, it came down to, "Well, it's up to you. You
22 have to decide what accessible piping is to be insulated."

23 And for me, as a building official, I think the
24 Energy Commission has to pull the trigger and say, "This is
25 what's required." And not say, "It's up to you." You

1 can't on one hand say it's up to the building official, on
2 the other hand say, "You know, we have a problem with
3 inconsistent compliance or enforcement."

4 To try to gain some additional clarity I went
5 GODAY's (phonetic) website and I registered the project.
6 And I ended up getting a CF-1R document. I know 15 pages
7 or something like that, 4 pages of forms, another 11 pages
8 of instructions, which we don't require.

9 In compliance with Tenant-103 (phonetic) we don't
10 require CF-1R in Davis for simple projects although we are
11 required to collect the CF-2R. Go to the Energy Commission
12 website to get the CF-2R for a water heater replacement and
13 it's an 8-page document, 6 pages of forms, 2 pages of
14 instructions. And the form says, "This is not valid, for
15 information collecting purposes only."

16 To me that's unacceptable to bring to the public.
17 So I paid \$450 to buy software to convert a PDF to an Excel
18 spreadsheet. And I revised it and I got it back down to
19 one page, which I still think is unnecessary for a water
20 heater change out, to have a CF-2R. And I don't know if I
21 have any more time, but I do have -- shall I continue?

22 MR. STRAIT: Three minutes per issue.

23 MS. MACDONALD: I know you had indicated on the
24 phone you had another meeting, but go ahead.

25 MR. MAHONEY: The other one was the CF-2Rs.

1 MS. MACDONALD: The CF-2Rs, go ahead.

2 MR. MAHONEY: I think it is a realistic solution,
3 because the comment -- the concern has been all along
4 complexity to Energy Code. And while I'm on that really
5 quickly, like I said I teach that class, and it's the only
6 code -- I teach a number of classes -- it's the only one
7 where I have to spend an inordinate amount of time
8 explaining to the students how to navigate the Energy Code.
9 And they still perform poorly on an open book test, because
10 they can't find the answers.

11 Anyways, so I think a realistic solution to the
12 overwhelming amount of paperwork that's required is to
13 eliminate as much as possible the installation forms. All
14 the other codes that we enforce, we don't ask the
15 contractors to say, "Yeah," provide all this documentation,
16 which is literally dozens of pages, to say that you did it
17 correctly.

18 You know, when a field inspector is handed 50
19 pages of documents at the time of final -- it's not
20 helpful. You know, the inspectors who maybe aren't as
21 thorough as they should be kind of see that -- or it
22 creates a false sense of performance. They may see that as
23 de facto permission to not do the inspections. "Here I
24 have all this documentation that says it's good."
25 Inspectors who do take their job seriously would have to

1 spend half an hour going through these forms to see if
2 they're all complete and correct rather than spending that
3 time doing the inspections.

4 And I don't think there's that much value in
5 them. I've actually been literally walking up the ladder
6 to do an insulation inspection in the attic, contractor
7 hands me his CF-6R that says "Under penalty of perjury I
8 certify that there's R-38 in this attic" and I get up there
9 and there's zero insulation.

10 Yeah. Anyways so -- and a few years ago -- and
11 I'll just go ahead and mention the name, because it's a
12 large company and what I'm saying is 100 percent factual.
13 I was doing an HVAC change out inspection for Bonney
14 Plumbing, they do thousands of change outs a year, and it's
15 obvious to me that it wouldn't pass the duct test. And I
16 verified with the homeowner that no duct test was
17 performed. I confronted the contractor, the contractor's
18 admitted to me that they didn't have a duct tester, they
19 did not own one; and so thousands of projects with no duct
20 test to verify that the ducts leak.

21 So I question the value of CF-2Rs. I don't think
22 that -- I think it's a lot of effort that we're putting
23 forth to generate these, collect them, and review them.
24 And I think that time should be spent actually inspecting
25 the project. In the City of Davis, we collect all these

1 documents and we scan them and we store them. And I think
2 my opinion is that we're requiring these documents and
3 going through all this trouble and I feel that the
4 documents have little value.

5 I think that the documents that are important are
6 the compliance document, absolutely get that information on
7 the plans. I fully support the acceptance program where we
8 have someone who's qualified to do that, because I'm not
9 qualified to verify lighting controls. And also the
10 verification documents I think are absolutely necessary,
11 but I think the installation forms are, in my opinion, of
12 little or no value. And I have been doing this for 25
13 years, so I think it's -- I don't know, I guess that's it.

14 MS. MACDONALD: Thank you. Are you going to file
15 those comments on the docket too?

16 MR. MAHONEY: Sure.

17 MS. MACDONALD: Anyone else or Peter?

18 MR. STRAIT: I have one quick question first.
19 Normally for the Commission meetings we have a small timer
20 that we use. Do we have that available or?

21 UNIDENTIFIED SPEAKER: We do.

22 MR. STRAIT: Okay. I don't know if we need it
23 yet, but I just want to know that we have it.

24 MS. MACDONALD: I also have a microphone here if
25 anyone would like me to come to them, if they don't want to

1 stand up. I know there's other comments out here.

2 MS. THOMAS: Hi, I'm Gene Thomas with Ecology
3 Action. We're a large third-party program implementer for
4 energy efficiency programs with about 30 million under
5 contract. About 60 percent of our savings comes from
6 lighting retrofits and that's what I'm speaking to today.
7 And I'd first like to thank the Commission for convening
8 this docket. I mean, it's very welcome and long overdue.

9 And I'm hoping that one of the key things that
10 comes out of this is finding a way to relieve the harmful,
11 unintended consequences that the code has had on the
12 lighting retrofit industry. I mean, literally scores of
13 stakeholders have submitted comments attesting to the
14 seriousness of the current situation including lighting
15 contractors, designers, maintenance contractors, program
16 implementers, product manufacturers, distributors,
17 recyclers, local government partnerships, municipal
18 utilities, a university and more.

19 We at Ecology Action have also experienced the
20 negative effects of the 2013 code's overreach on lighting
21 retrofits. So just so you have a little data to think
22 about, we looked at the data across all of our programs for
23 the first half of 2014 compared to the second half of 2014
24 when the 2013 Code took effect. So here's just three
25 examples.

1 Our ceiling troffer retrofits linear fluorescents
2 decreased dramatically. As a percentage of our total
3 lighting savings the kWh dropped by 46 percent in the
4 second half of the year. Per project savings was
5 significantly lower, average lighting savings per customer
6 dropped by 33 percent in the second half of the year.

7 And overall code-triggering jobs are not selling.
8 In the first half of 2014 53 percent of our lighting
9 savings came from projects that would have triggered code
10 under the 2013 Rules. After the code took effect, less
11 than 2 percent of our savings have come from code-
12 triggering jobs.

13 So to be clear, we're not talking about new
14 construction gut rehabs, major tenant improvements where
15 you're ripping out the suspended ceiling and redoing the
16 whole reflected ceiling plan and you're adding walls,
17 replacing other systems etcetera. We're just talking about
18 the basic simple lighting alterations and modifications
19 that provide the lion's share of commercial lighting
20 savings in California. And it's clear that savings is in
21 major jeopardy.

22 We'd like to also emphasize that we support the
23 current version of the 2016 language, Version 18 for
24 interior and Version 8 for exterior. We think that solves
25 many of the major problems. So really it becomes a

1 question of what are we going to do now before the new code
2 on January 1st of 2017. As the comments have attested,
3 many of the people in the lighting retrofit industry are
4 going to be out of a job before January 1 of 2017. And the
5 State will only achieve a fraction of the lighting savings
6 that it's counting on.

7 So we believe that the most effective and least
8 disruptive way of solving the current problem with the 2013
9 language is through a tacit agreement to begin working
10 under the 2016 language as soon as that's adopted, the 15-
11 day language is adopted.

12 But whatever changes are made in how the 2013
13 Code is interpreted and enforced, the changes should be
14 simple and should not create additional burdens for
15 retrofitters that will generally not be required under the
16 2016 Code. And those would include things like measuring
17 square footage, performing lighting power density
18 calculations and any permitting should be very streamlined
19 and accomplished over the counter.

20 So thanks very much for giving me the opportunity
21 to comment.

22 MS. MACDONALD: Thank you.

23 MR. SHIRAKH: Thank you, Gene. We're aware of
24 the concerns about -- this Mazi Shirakh, the Project
25 Manager for the Building Energy Efficiency Standards. And

1 we've been working with the lighting retrofitters over the
2 past couple of months to resolve some of the issues. At
3 the same time we've also become aware of one of the new
4 products that's available on the market. And actually in
5 the audience I see Cheryl English, she is the Vice
6 President of Acuity Brands. And I would like to ask
7 Cheryl, if she may, to take a couple of minutes to talk
8 about some of the new products that might be available out
9 there for retrofitters -- that can take advantage of. I
10 think we should.

11 MS. ENGLISH: I noticed that some of the people
12 on the Web said that they couldn't hear, so do I need to
13 turn this one?

14 MS. MACDONALD: We just checked it, it's supposed
15 to be on.

16 MR. STRAIT: It's on.

17 MS. MACDONALD: I can give you this one. We know
18 this one works for sure if you hold it to your face.

19 MS. ENGLISH: Okay.

20 MS. MACDONALD: And then also as we give comments
21 can you state your name, so that we can get it for the
22 court reporter? Thank you.

23 MS. ENGLISH: Thank you. Cheryl English, Acuity
24 Brands. So thank you for the opportunity. Hopefully
25 you'll indulge me, I've already lost 30 seconds trying to

1 get the microphone here. I have traveled from the East
2 Coast and the amount of money I've spent for my three
3 minutes of time is rather expensive. But I do appreciate
4 the opportunity to comment.

5 This is a rather unusual workshop and I know you
6 said this is the first time you've done this, but we were
7 not really clear what was on the docket here. So it's
8 rather odd with respect to the lighting alterations that
9 we're talking about changes to the 2013 Code while the 2016
10 Code is still being developed and commented on.

11 Acuity and other industry members have a history
12 of collaborating with the Energy Commission to achieve the
13 net zero energy goals. And in 2005 there was a very
14 collaborative process for that code cycle to develop
15 controllable lighting. And it was very critical that
16 existing buildings had to begin to have an infrastructure
17 for controllable lighting to get to a net zero.

18 Simple component replacements were not going to
19 achieve the energy savings or establish an infrastructure
20 that can reduce lighting based on demand and the needs of
21 the space or respond to demand management. So that is what
22 has resulted in the 2013 Code relative to controllable
23 lighting.

24 I appreciate that there's been a lot of anxiety
25 about the 2013 Code and especially the controls

1 requirements. And if you've noticed I'm wearing my button
2 that says "Title 24 is your friend." We had to do a lot of
3 training with our customers to help them understand the
4 variety of solutions that can go from simple control
5 capability to even complex control capabilities depending
6 on the application.

7 So industry has made investments to support this
8 new code and the Commission has said over and over, that
9 the code development cycle is to encourage all of us:
10 manufacturers, designers, installers, contractors to
11 approach energy efficient buildings differently. That's
12 what code cycles are about, so we have responded to this
13 challenge.

14 And for Acuity Brands we have made an investment
15 in new products including retrofit controllable lighting
16 replacement. These are retrofit types of solutions:
17 luminaires, LED luminaires, LED retrofits. We've also
18 invested in controls that include wireless control
19 capabilities or plug-and-play controls. And these do not
20 require the installer to have to go in and tear out the
21 wall and change the wiring solutions.

22 We've also invested in training. We've done
23 extensive training throughout the State of California, both
24 for our salespeople, as well as for our customers. And
25 Kelly Cunningham is actually here today from the California

1 Lighting Technology Center. And we had contracted with her
2 to help with a lot of that training and this was not with
3 any use of public funds. This is funding that was
4 determined and coordinated by Acuity Brands and our sales
5 agents to help ensure that our customers made a smooth
6 transition to the 2013 Code.

7 We also continue to promote lean management
8 processes in our business to improve the manufacturing
9 efficiency to help drive the cost of these product
10 solutions down now and continuing in the future.

11 So these are investments in California's future.
12 And they do impact 350 Acuity Brands employees who are
13 based in California focused on these types of solutions.

14 In terms of the economics we've successfully
15 worked on a variety of lighting alterations with commercial
16 offices, retailers, healthcare facilities and universities
17 who are meeting the 2013 Code Standard. The applications
18 vary and the lighting and control solutions vary based on
19 the need, so some of the simple ones can pay back in less
20 than a year. Some of the more complicated will have a
21 payback of around five years.

22 The energy savings associated with all of these
23 are significantly higher than the component replacements
24 like the lamp and ballast replacements. Plus they set up
25 the infrastructure to have future controllable lighting

1 capabilities. They deliver higher quality lighting
2 performance than typical component replacements.

3 We have a very significant concern with the
4 backsliding. And I know you said this workshop's about the
5 2013 Code, but at the same time you have an open docket on
6 the 2016 Code on this issue as well. Backsliding either
7 2013 or 2016 is going to fail to establish this
8 controllable infrastructure that's needed to get to net
9 zero.

10 There's been a lack of data and evidence to
11 support the claims regarding the issues. This causes
12 financial harm to the companies who have made changes to
13 our business and investments in product and in training.
14 So my recommendations are to maintain the 2013 Code, to
15 continue to work aggressively on the 2016 Code.

16 We do not support the backsliding in the lighting
17 alteration requirements. We believe that the 10 percent
18 change out threshold should remain at 10 percent. And we
19 believe that the 85percent power density exemption, if you
20 would call it an exception, should be actually a lower
21 threshold, because LED lighting solutions perform
22 significantly lower as compared to the traditional lighting
23 technologies.

24 We also believe that you should promote training
25 and I think that you did a great job explaining all the

1 tools and resource that are available through the
2 Commission. I think that the industry should continue to
3 use those, but there are also other opportunities like what
4 CLTC has done and perhaps the Commission will want to
5 consider a more focused training session specifically for
6 builders and building owners and contractors.

7 And so that concludes my comments on the lighting
8 alterations. Thank you, very much.

9 MS. MACDONALD: Thank you. I'd just like to note
10 -- this is Rachel MacDonald, with the Energy Commission,
11 and I'd like to note that we are not looking to change the
12 2013 regulations, codes. Those are adopted. Those are in
13 effect. What we're looking to do is to work with the
14 public, with stakeholders with the comment that was just
15 made, such as better focused training for builders and
16 owners. We're looking to improve forms, software,
17 communications, better clarifications and understanding, so
18 that's what we're trying to do.

19 And I know I have comments from V. John White.
20 I'll come to you.

21 MR. WHITE: Thank you. My name is V. John White.
22 I'm the Director of the Center for Energy Efficiency and
23 Renewable Technology. The reason I'm here today is because
24 we haven't been following this proceeding in detail, but we
25 have some concerns about particularly the definitions and

1 requirements for the net zero energy home standard for
2 2020.

3 In particular, we're concerned about the
4 allowance for gas water heating to be sort of hardwired
5 into the definition. A couple of reasons that that's a
6 concern: one is in the future we think that we're going to
7 need to reconsider the role of natural gas and heating and
8 cooling. And in the electric sector --

9 (Audio technical difficulties)

10 Okay. Thank you for your courtesy. Is that
11 better?

12 MR. STRAIT: Oh, yes.

13 MR. WHITE: All right. I'm John White with the
14 Center for Energy Efficiency and Renewable Technology.

15 Our issue of concern is with the treatment of
16 natural gas water heating as eligible under the definition
17 of net zero energy home. We think that's kind of, first of
18 all, inconsistent because a net zero energy home that still
19 burns gas strikes us as kind of an oxymoron maybe.

20 The other reason to be careful about natural gas
21 though is because of the 2030 and 2050 modeling work that
22 has been done for the Energy Principles Group by E3 --
23 suggest that by 2050 we're going to need to have greatly
24 diminished our consumption of natural gas. I think the
25 interaction between electric water heating storage solar

1 demand response is one that should be reflected in these
2 standards. It seems to us that in the future we're going
3 to want to minimize our reliance on natural gas water
4 heating where we can. I'm not suggesting it be eliminated
5 where there aren't alternatives, but neither should it be
6 sort of made the default choice without even really trying
7 or looking.

8 It seems to us that the other thing to think
9 about is electric water heating, while it has a history of
10 being something that we move away from as we look at the
11 over-generation situation on the electric grid and the
12 opportunity to use electric water heating as a demand
13 response mechanism, it's ability to work together with
14 solar and storage suggests that when we're looking for the
15 gold standard, if you will, of future design requirements.
16 That we shouldn't just throw in existing practices without
17 some serious thought.

18 So we're just getting our thoughts together on
19 this issue, wanted to come and make an appearance today.
20 And we'll try to develop some comments in writing, but I
21 just wanted to at least flag this issue as one that was
22 worth bringing to your attention. So I thank you for
23 letting me speak.

24 MS. MACDONALD: Thank you.

25 I do have a caller on the phone by the name of

1 Anthony.

2 MR. ANDREONI: Hi, can you hear me?

3 MS. MACDONALD: Yes, we can hear you Anthony.

4 MR. ANDREONI: Hi, this is Anthony Andreoni from
5 the California Municipal Utilities Association.

6 MS. MACDONALD: Go ahead.

7 MR. ANDREONI: There is a little bit of humming
8 on this phone here, so I'll try to do the best I can.

9 (Indiscernible) I provided some -- and that was
10 in relation -- I don't --

11 MS. MACDONALD: You're cutting out, Anthony.

12 MR. ANDREONI: Can you hear me any better, does
13 this help?

14 MS. MACDONALD: Yes, go ahead.

15 MR. ANDREONI: Okay. There's still some humming,
16 so it's really hard to tell.

17 We provided comments under the Docket 15-ESTD-01,
18 which is for the 2016 Title 24. And I was curious to find
19 out if you were going to consider those comments as well,
20 because we did provide comments related to the 2016 Title
21 24 as well as 2013 Title 24. Do those comments have to be
22 resubmitted?

23 MS. MACDONALD: It would be nice to have that the
24 (indiscernible) Since the scope of today is 2013 and how
25 the Energy Commission staff within the Standards

1 Implementation Office, on an ongoing basis, works with the
2 public to implement the 2013s I would appreciate it if you
3 would file the comments that are specific to the 2013s to
4 this docket. And I can help you do that if you would like
5 me to.

6 MR. ANDREONI: Okay. So I'll just verbally
7 provide you with some of the comments related to our
8 letter, but I appreciate the clarification on that.

9 MS. MACDONALD: Okay.

10 MR. ANDREONI: So the comments really relate to
11 the fact that 2016 Title 24 changes to Part 6, Section 141,
12 the nonresidential lighting alterations is being modified.
13 And you have quite a few comments on this from a number of
14 organizations. CMUA represents roughly 40 publicly owned
15 electric utilities in California and this has been a very
16 important issue to our members for the nonresidential
17 lighting retrofit issues that have come up since 2013.

18 There have been a number of challenges in
19 upgrading and retrofitting nonresidential lighting systems.
20 There's a language in the 2013 Title 24 Codes and
21 Standards, and we see some positive changes in the 2016
22 version that we think would be very useful if there was
23 some type of reach back or some type of modification that
24 allows those changes for 2016 to become effective much
25 sooner than the January 2017 implementation.

1 So we see some positive changes moving forward,
2 but we would like to see those changes occur much sooner
3 for our members and to continue our ability to gather all
4 energy efficiency reductions possible. And many of our
5 utility or our member regions certainly would.

6 UNIDENTIFIED SPEAKER: Rachel, can you ask him
7 for specifics (indiscernible)

8 MR. ANDREONI: So that's our comments regarding
9 that particular issue for the 2013 Title 24.

10 UNIDENTIFIED SPEAKER: Rachel, can you ask him
11 for specifics?

12 MS. MACDONALD: Anthony?

13 MR. ANDREONI: Yes?

14 MS. MACDONALD: This is Rachel from the Energy
15 Commission. We have a question in regards to more
16 specifics, more granular as to what are the barriers,
17 what's making it difficult. And Mazi has a question.

18 MR. ANDREONI: Sure

19 MR. SHIRAKH: Hi, Anthony. This is Mazi at the
20 Energy Commission. Hopefully you can basically give us
21 some specifics. What is it in the 2013 Standards that is
22 giving you trouble? Is it the controls, is it the wiring
23 requirements, is it the multilevel controls? I mean, we
24 get a lot of comments that are basically too general and
25 what we need is more specifics, so we can basically narrow

1 down what the problem is.

2 I mean we just heard some testimony from Acuity
3 Brands that they have come up with a variety of products
4 that may or may not solve your problems. But without
5 knowing the specifics that's causing the trouble we're
6 going to be having a hard time responding. So I would
7 appreciate if you can break it down for us.

8 MR. ANDREONI: So I appreciate that and I think
9 the letter that we provided for the 2016 Title 24 will
10 provide will provide you a little more information. And I
11 know there were a number of comments that were provided in
12 that docket. And I know in the last workshop that you held
13 there was a pretty robust discussion. And I think what it
14 does is it surrounds the nonresidential lighting
15 alterations in Part 6 Section 141.0(B)(2)(i) that
16 simplifies and streamline the requirements or the lighting
17 alterations -- separating the lighting alterations, the
18 wiring alterations, and the luminaire modifications and
19 reducing the multilevel or automatic control requirements.
20 And I think those are the areas that the 2016 Title 24
21 Codes are making changes to. That would be (indiscernible)
22 the 2013 had some challenges in being able to move forward
23 with those retrofits. But if that doesn't answer your
24 question certainly I would like to have a further
25 discussion with you after you've had a chance to look at

1 our letter.

2 MS. MACDONALD: Thank you, Anthony.

3 MR. ANDREONI: But the only --

4 MS. MACDONALD: No, go ahead.

5 MR. ANDREONI: I'm sorry. The only other area I
6 was going to comment on and I don't know if one of our
7 members is on the phone from the Mission Palo Alto, but
8 this was recently just brought up in another comment that I
9 heard about encouraging electrification utilization for
10 reducing overall carbon manipulation in residential hot
11 water heating systems.

12 And I think that this is an area that we would
13 certainly engage the Energy Commission to have more
14 discussions on this. As my understanding currently in the
15 Title 24 Building Code requirements there is a modeling
16 effort to show that if you're switching between natural gas
17 and electricity that there is a -- it uses the no more
18 energy clause under Code Section 150.2€(2)

19 And we would like to find out if there is a way
20 to reduce some of those barriers for customers to consider
21 those types of systems recognizing the potential carbon
22 benefit. And we would certainly appreciate any dialogue
23 with the staff on that.

24 MS. MACDONALD: Thank you, Anthony. I appreciate
25 that comment and then the comment from V. John White about

1 that, because it isn't a comment that has come in before.

2 And I think we certainly need to explore it more.

3 And I know I have another caller on the phone. I
4 have Mr. Pat Splitt.

5 MR. SPLITT: Rachel, (indiscernible) a real quick
6 comment on the issue you were just talking about.

7 MS. MACDONALD: Thanks, Pat.

8 MR. STONE: Nehemiah Stone with the Benningfield
9 Group. I was just at the National Code Conference, the
10 DOE's Code Conference back in Nashville. And one of the
11 presentations was about the use of electric water heating
12 that was grid tied by the electric cooperatives in the
13 Midwest and the East. So they've got a lot of details on
14 that that might be helpful to seeing what's possible here.

15 MR. SPLITT: Okay. It's Pat Splitt from App-
16 Tech. I just want to make a comment on the Acuity
17 presentation is that all this new control equipment is
18 really nice, but where I see problems is I work in Santa
19 Cruz and I do a lot of small jobs, not big city jobs where
20 you've got electrical engineers and architects.

21 A lot of these are things like dental office TIs,
22 there are a lot of those, and it's mainly just lighting and
23 moving some walls around interior. And those aren't even
24 done by an architect. It's usually somebody like an
25 interior designer that does those. And you can give them

1 all the specs about this is the equipment you need, but
2 they're the one that has to sit down there and draw this
3 diagram with the little lines going from the switches to
4 the circles in the ceiling.

5 And, you know, they've been doing that for 20
6 years and it's been just a struggle to get them to put a
7 little OC in there for "occupancy censor" or a D for
8 "dimmer." And to try to get these controls drawn, so that
9 somebody that's installing them knows what's expected is
10 problem, because even though it's just a small space
11 they've got skylights, they've got windows with
12 daylighting. They've got special lighting equipment.

13 And so what's needed is something not just
14 specing out what the new equipment is, but examples. Like
15 maybe CLTC could do something like they did for the
16 residential is to come up with actually wiring examples for
17 typical installation that show how all this stuff gets
18 wired together and back to the panel box. And what should
19 be on the drawing, because that's what's missing.

20 And if it's not on the drawing it doesn't get put
21 in.

22 MS. MACDONALD: Okay. Peter?

23 MR. STRAIT: I'd like to say that's actually an
24 excellent idea. And that's one of the things that we want
25 to do in this dialogue is identify ways that we can assist

1 with the implantation now, so some idea that maybe we can
2 do some wiring examples that both identifies the problem
3 and starts a dialogue about a solution. So I just want to
4 say that's a good comment.

5 MS. MACDONALD: Thank you.

6 MR. NESBITT: George Nesbitt, I have some
7 process questions here first. This is a workshop about
8 implementation of the 2013 Code. We have people who've
9 traveled from the East Coast, myself, I woke up three hours
10 early. It's \$58 for Amtrak roundtrip. I could've used
11 three gallons of gas in my Prius, but I couldn't have done
12 anything and it's a five-hour round trip. So I can either
13 waste my only three minutes to tell you very general things
14 about the problems with the code and implantation. Or I
15 can barely even touch on a single subject.

16 So, you know, this not an -- are we going to be
17 gone before 12:00, because we all have three minutes?

18 You know, so --

19 MS. MACDONALD: Say what you need to say.

20 MR. NESBITT: You know, I mean I'm frustrated
21 because it's an opportunity for you to listen and hear
22 about some of the things. And it's not that you haven't
23 heard some of them before, but also to work and have some
24 back and forth. And we can also get really stuck in some
25 of the weeds and things that are tangential, so there's

1 like no structure here. Anyway.

2 MS. MACDONALD: George, I appreciate you coming
3 here and the three minutes is not about --

4 MR. SANGUINETTI: He wants more of a roundtable.
5 He wants more of a roundtable.

6 MS. MACDONALD: Well, okay so and that's
7 something we can talk about for future as we vet this out
8 on what needs to be done and what are the high-level
9 important things and the here and now. What we've got to
10 dig into as staff working with the public is roundtable
11 stakeholder work groups on specific subjects. And that's
12 something we can, as staff internally, reach out and
13 develop possibly. Like a working group or more meetings to
14 discuss these things

15 But I don't want you to feel that you can't
16 speak, because you can. And if you have 250 pages of
17 comments that would probably be a little hard to get
18 through right now and I'm taking up valuable time. And I
19 don't -- I set the time on this at 10:00 not knowing when
20 we were going to be back.

21 (Colloquy in background.)

22 So while we don't want to rush this we are here
23 kind of in this new process. But we're here, our ears are
24 open and we're listening. And I genuinely need -- we want
25 to get you, so if you would like to take your time --

1 although not time all day, but if you want to go through
2 your issues let's talk about that. That's what everybody's
3 here for and I know this is kind of new, uncharted
4 territory. And today's kind of unknown, but please go for
5 it. And if you want to cover the high-level things that
6 you want to talk about I can pass you the microphone.

7 MR. STRAIT: Also, I would like to enforce that
8 the three minutes is really so that everyone here gets a
9 chance to speak. We didn't know how many people would show
10 up. We don't know how many people on the phone want to
11 also have their opportunity to speak. People can get up
12 multiple times and we're going to be here as late as it
13 takes. So we're not planning on ending this meeting early.
14 We just want to make sure that we don't have our entire
15 time monopolized by one or two people that have a lot to
16 say. If there's an extended long form or detailed thing
17 you want to give to us there is also an open docket, so
18 that people can give us written comments.

19 MR. NESBITT: And as those of you know me, I can
20 get up and talk.

21 MR. SHIRAKH: We do. I'm aware of that.

22 MR. NESBITT: And you're more likely to get
23 verbal comments than written comments out of me, because no
24 one's paying me to be here. I'm losing money being here.

25 I think one of the things you actually have to

1 understand is we have a total lack of enforcement. In 28
2 and a half years as a contractor in the trades, I have
3 literally never had to comply with the Energy Code.

4 I've installed duct systems, brand-new duct
5 systems and furnishes that should have been HERS verified.
6 I've installed commercial water heaters that don't comply
7 for residential, because you need an energy factor, you'd
8 have to go performance path. So there's a tendency to
9 think if we just get permits -- and it's too bad our guy
10 from Davis is not still here -- if we just get permits
11 we'll have compliance. No, we won't have compliance as
12 long as the industry and the building departments don't
13 understand the code, don't enforce the code.

14 I added up the number of pages in Title 24, all
15 the building codes: building, mechanical, plumbing,
16 electrical, energy code, historic, fire. Almost 6,000
17 pages and that includes 168 for the Standards. If we go to
18 the Energy Code: the Standards, the reference manuals, the
19 ACMs, the appendices there's almost 3,600 pages. And it's
20 scattered all about and that's one of the problems. People
21 don't understand it.

22 And I get it all the time. Architects will go to
23 a lecture, probably from the guy that left, and come back
24 and say, "Oh, we're now required to put in R-13 walls and
25 R-4 insulation." I'm like, "No." So there's a massive

1 lack of understanding: architects, builders,
2 subcontractors. Last month I got two different answers
3 from the same person on an issue in the 2016 Code update.
4 We don't get consistent answers out of the Energy
5 Commission.

6 So, you know, we have a lot of fraud. Energy
7 consultants that have been doing it for decades, they're
8 certified, they've been on the Board, they write the tests.
9 And they can't put a standby loss on a commercial water
10 heater or they do all kinds of other things and commit
11 fraud. So it's a humongous problem.

12 And I do think there are errors in the code. We
13 shouldn't be afraid to go back and change it. You issue
14 errata, but the problem is you issue errata separate from
15 the Standards and the various manuals and going back and
16 putting it into one document. So now I now need to look at
17 a half a dozen documents to make sure? I'm actually
18 working on something to actually solve a lot of this, but I
19 don't get enough time to do it.

20 There's a lot of problems involving registry and
21 all the forms, how many people need access to registry
22 signing off. Who can sign off the processes, this has to
23 be signed off before that, and it's a mess. We're told as
24 HERS Raters that if we're doing sampling we cannot be the
25 document author for the 2-Rs. You know what? They're all

1 giving us access. We're doing the forms anyway, so just
2 because people can't handle it.

3 So there's specific things here and there that we
4 can go into more detail, but that's sort of a broad
5 overview.

6 MS. MACDONALD: Thank you, George. I appreciate
7 you and your candid responses. And also I know you are
8 participating in the HERS OII. That's a separate docket.
9 That's a separate proceeding. Anyone in here interested in
10 that you can contact me, I'm the lead on that as well.

11 I do have some callers on the phone and I'll get
12 to you right after this comment.

13 MR. WILLMARTH: Hi, I'm Ruben Willmarth with
14 Carrier. I did misunderstand the intent of this meeting
15 just a little bit, so my written comments are a little
16 different. But I did want to give you the feedback all the
17 same.

18 In my position I've had the opportunity to get
19 feedback from many people in the engineering community.
20 And I've found the current code for application of
21 economizers is quite confusing to many in the field when it
22 comes to VRF systems with many who are incorrectly assuming
23 that the controls language also applies to the selection of
24 an economizer.

25 The original proposed language of Section

1 140.4(e) used to read, "Each individual cooling fan system
2 that has a design mechanical cooling capacity over 54,000
3 BTUs and an airflow of 1,800 cfm shall include an air side
4 economizer." Now, while the 1,800 cfm was removed in order
5 to align it with ASHRAE's 90.1 language it did offer
6 clarity that I have really missed. And the word
7 "individual" was another clarifier, but it was removed in
8 the 15-day language for reasons I could not ascertain.

9 So I do realize the controls language in Section
10 120 has been corrected for the 2016 a few years from now.
11 But until then I really would ask the Commission that they
12 consider restoring the word "individual" to Section 140
13 language to help provide that clarity that we need by all
14 going forward.

15 Now, I do know that the Commission has done --
16 the Blueprint, they did have a comment on that in the last
17 edition of it and that's good. But I think the real
18 problem is the root language and as he said, you know, why
19 can't we fix the root of the cause instead of band-aiding
20 it for another couple of years? I think one word's change
21 can make a significant difference in the clarity for
22 everybody involved. Thank you.

23 MS. MACDONALD: So can I ask you, do you want a
24 further clarification beyond the Blueprint or --

25 MR. WILLMARTH: It just doesn't -- the Blueprint

1 is like I said, it's a band-aid. It's another separate
2 document. Not everybody gets the Blueprint and I'm going
3 to be mailing it out to everybody I see, you can be sure
4 that, but it takes time to disseminate. And when people go
5 back to the root language they don't always look at the
6 handbook or the Blueprint or anything else. And we're
7 talking about a single word's change and that to me seems
8 worthwhile doing for at least two years of implementation.

9 MS. MACDONALD: Okay. Thank you for your
10 comments.

11 On the phone I know I have comments, so let's get
12 to the phone real quick. Mark, are you there?

13 MR. COSTA: Yes.

14 MS. MACDONALD: Okay. Go ahead, Mark.

15 MR. COSTA: Hi, this is Mark Costa from the Energy
16 Coalition.

17 And so we've through a few different channels
18 through the LCC (phonetic) and SoCal Grant we've submitted
19 comments on the 2016 Code and we just want the opportunity
20 to reiterate some of the comments that would apply for the
21 current code enforcement. And those really go around what
22 we see as far as simplicity and process of enforcement, not
23 so much the specifics on sections of the code. But we
24 acknowledge that we're not going to solve everything with
25 the silver bullet approach. But we do want to say that the

1 tracking of, not the permitting rate per se, but the
2 compliance rates and data that goes into it is very
3 important. And this is highlighted in Section 8758
4 (phonetic) under Goal 1. And what we would like to
5 highlight is opportunities for process standardization in
6 compliance at the local government permitting jurisdiction
7 level issues around documents and data accessibility. And
8 enhance resources for local government to enforce the code,
9 albeit if it's not additional staffing resources but
10 process resources.

11 And we definitely acknowledge that the IOUs have
12 created energy (indiscernible) they've had trainings,
13 they've done studies that contribute a lot to the process,
14 but there is still more that can be done. CNB (phonetic)
15 has produced a residential HVAC alteration study, BayREN
16 has put out their PROP study, fantastic resources, but we'd
17 also like to highlight that SoCalREN is also working on a
18 permitting process standardization. And we would
19 definitely welcome the Commission to give us input on this
20 and collaborate on this.

21 And what we're doing is we're working with online
22 permitting vendors to fundamentally change the way that the
23 industry standard practices work around their offerings in
24 the industry. And this effort is being done with
25 (indiscernible) money (indiscernible) this really changes

1 the market and allows a connection between the process of
2 enforcing Title 24 and the simplicity that goes with that.
3 The Board data that we can digitize and consume in a very
4 simplified manner, especially when it's a performance
5 approach. It's very beneficial.

6 And so things like having the software systems to
7 be able identify if code is -- if Title 24 is triggered,
8 being able to label the uploaded documents if it's an NRCC
9 lighting form, being able to track the above code savings,
10 being able to consume (indiscernible) files from CBECC.

11 These are things that we would love input on. We
12 would love collaboration with the Commission. We would
13 love collaboration with industry stakeholders. And so the
14 question is does the Commission think it's a worthwhile
15 effort to help standardize not only what's been done as far
16 as the code and the compliance software, but the resources
17 that go into enforcing the code at the local government
18 level.

19 So that's the question is it being something
20 that's being thought about? Is there an aptitude for AB
21 758 to work on that? And we would love any input.

22 MS. MACDONALD: Thank you. I actually have Bill
23 Pennington here who wants to speak to that.

24 MR. PENNINGTON: Thanks, Mark for your comment.
25 Yes, the Energy Commission is quite interested in

1 initiatives related to improving compliance with the
2 Standards and looking at a variety of ways to do that,
3 including some of the examples that you mentioned. And the
4 AB 758 Action Plan staff is very interested in assisting
5 along with the Implementation Office here in that
6 collaboration. So we welcome your ideas and we want to see
7 how we can address them.

8 MR. COSTA: Thank you.

9 MR. SHIRAKH: And this is Mazi Shirakh again.
10 I'm usually not the one to ask George to come back to the
11 podium, but let me do just that. So you just mentioned
12 that a lot of people are filling out fraudulent forms and
13 frankly they don't care.

14 Now, with the 2013 standards we know they have to
15 upload these forms up into a register. Now, has does this
16 work and what is the thinking process. Now, do they think
17 they can fill out a fraudulent form and upload it to a
18 registry and they will be okay forever? And does liability
19 mean anything to them?

20 MR. NESBITT: George Nesbitt, so it was the
21 building official from Davis who talked about people
22 filling out fraudulent forms although yes, as a HERS Rater
23 a) we have trouble even getting 6-Rs or now 2-Rs from
24 installers. You get them with the wrong information. They
25 don't know what they're doing on that job, so yeah. The

1 reason it's called a perjury statement is because you're
2 committing perjury.

3 So I did a change out, my first 2013 duct test
4 for a change out recently. So I created the CF-1R in the
5 registry. Then I had to log on with the HVAC installers
6 account. Luckily they had one, because they'd been through
7 it before and in the past it's been really difficult for
8 people to get on the registry. So then I had to log in
9 with their account, sign off for them on the 1R and then in
10 their account I could create a 2R, sign off for it. Then I
11 have to share it with me as the rater and then I have to go
12 in and create the 3R and sign off on it. And, of course,
13 in some cases you have to pay. Well, like for the 3R I
14 have to pay before it's fully signed off.

15 So there's a lot of steps in there and a lot of
16 back and forth. The reality is, I'm sure, that most HERS
17 Raters are filling out forms through the installers even
18 though the Commission may not wish that the reality is
19 that's the way it get done is often for the HERS Rater to
20 do it. It's a little complicated process. And honestly I
21 don't think we want every contractor in the State and every
22 architect to have to be signed on to the registry to have
23 an account. It's a bit security risk. Honestly, let the
24 registry be controlled by HERS Raters and energy
25 consultants. And we provide them with the documentation.

1 MR. SHIRAKH: George, if I may interrupt?

2 MR. NESBITT: Yeah, that's fine.

3 MR. SHIRAKH: I understand the steps you have to
4 go through. I understand the complexity, the steps you
5 have to go through. I understand Raters want to sign on
6 behalf of installers. We're actually accommodating them in
7 2016 Standards. But my question is when you're going
8 through does truthfulness mean anything to you. Are you
9 worried about uploading stuff in there that is patently not
10 true, knowing that there's going to be a risk of liability?
11 An that's the question that I'm trying to get answered.

12 MR. STRAIT: And we don't mean you specifically,
13 we mean in general.

14 MR. NESBITT: Yeah, me yes. I have enough
15 trouble sleeping at night, who needs like that stuff.

16 MR. STRAIT: Yeah.

17 MR. NESBITT: Well, like I say time and time
18 again where I've seen CF-6Rs where they --

19 MR. SHIRAKH: 6Rs are from the past
20 (indiscernible)

21 MR. NESBITT: No, I know, but installer documents
22 that don't match what they actually did on the job, because
23 they don't really know what they're doing. And so for
24 them, they don't necessarily even know they're committing
25 perjury. I mean, that's just how bad our industry is. We

1 don't know what we're doing. We send guys out with trucks.

2 I did a multifamily job once. I go out to
3 inspect insulation. The building inspector just left or
4 was just leaving as I got there. I go up and look at the
5 wall insulation. It's R-13 in a 2 X 6 wall. It's R-19 on
6 the CF-1R, right? The building inspector didn't have a
7 problem with it. The installer didn't have a problem
8 installing the wrong thing, because that's what they had on
9 the truck that day. So even though the 1R said it, if they
10 issued a 6R which they didn't, they would have put R-19 or
11 whatever on it. And they don't necessarily, in some cases
12 realize they're committing perjury.

13 There are certainly those, oh yeah HVAC installer
14 not duct testing their own work. Obviously it doesn't fall
15 under sampling, it's not being tested 100 percent. They
16 are deliberately committing perjury and they can get away
17 with it. And honestly, until we make a case of an HVAC
18 installer for not pulling permits or pulling permits not
19 having HERS Rating, lying and cheating, until they're on
20 the 6:00 o'clock, 7:00 o'clock, 8:00 o'clock, 9:00 o'clock,
21 10:00 o'clock and 11:00 o'clock news. And they have to go
22 back -- and they're bankrupted, because they've got to go
23 back now to all their past jobs and pass the duct test, the
24 refrigerant or whatever it is. Until they go bankrupt
25 unless people get caught they're not worried. They may not

1 know or they're not worried, because they can get away with
2 it.

3 And so yeah, I mean and as a HERS Rater on a job
4 you have a higher likelihood of compliance. Not that we're
5 perfect. There are times I've enforced the intent of the
6 code and not the letter. It's just we're working with
7 people. We're trying to educate them. Often they haven't
8 done things before, yes there are HERS Raters that have
9 committed outright fraud too. But you're a lot more likely
10 to get things right.

11 MR. SHIRAKH: By the way, you got your
12 roundtable, so you should be happy about that. (Laughter)

13 MS. MACDONALD: Thank you. Pat?

14 Mazi, when you're not speaking could you turn off
15 your mic, because that humming turns up.

16 MR. SPLITT: It's Pat Splitt from App-Tech again.
17 Just one quick comment on this is I've been doing calcs
18 (phonetic) under the new code since July of last year. And
19 I've registered a lot of projects: new homes, alterations,
20 additions. And I have never, not once, had a HERS Rater
21 call me up or email me and ask me to share a file with
22 them.

23 MR. SHIRAKH: None for you?

24 MR. SPLITT: Not once, so as far as I know none
25 of them have ever had any of that HERS stuff done. The

1 only time I've ever dealt with a HERS Rater are when I was
2 doing existing condition verification where I actually had
3 to deal with them myself in order to get the documentation
4 done.

5 So it seems like one of the problems I see is
6 that there should be another line on the form, the CF-1R
7 that is required when a permit is issued where the owner
8 actually has to select the HERS Rater then. So it's
9 documented at that time that HERS Rater --

10 MR. SANGUINETTI: The owner or the contractor?

11 MR. SPLITT: Whoever is applying for the permit,
12 that they assign a HERS Rater. So now, once a HERS Rater
13 knows he's assigned he's going to want to get paid, so he's
14 going to follow up on this thing, maybe. I don't know, but
15 whether that's the right idea or some other -- but right
16 now I know, like I said, no one has never -- and it's nine
17 months that the Code has been in effect. A lot of these
18 alterations and additions are complete and HERS can mean
19 anything.

20 MS. MACDONALD: Thank you, Pat. Actually these
21 types of suggestions are what we're looking for. Specific
22 to comments that George made we are in active pre-
23 rulemaking right now for the HERS Program. Again, contact
24 Rachel MacDonald for more exciting information about that.
25 And under that as well is QII along with all the other

1 issues.

2 So I do have someone standing here to make a
3 comment. I know there's a comment on the phone; I'll get
4 to you right after this.

5 MR. CHRISTIE: Thanks, Rachel. Matthew Christie,
6 I'm Chair of the Board of Directors of CABEC, I'm also with
7 TRC Energy Services, speaking mostly on behalf of CABEC
8 from that position.

9 First off, we're very encouraged by this
10 proceeding in general and this docket. And are very
11 pleased that it was open and that it's intended to be open
12 long term and maintained open, because I think that's what
13 it really takes. It's crowdsourcing, code review, over
14 time. It's really almost impossible for the industry to do
15 that during the 45-day language period, during the 15-day
16 language. Unintended consequences, conflicts of language,
17 conflicts of terminology in the code writing itself don't
18 get discovered until Tuesday afternoon a year later, when
19 an actual Title 24 consultant who's out there working on a
20 specific problem and bumps into it. So I thank you for
21 keeping this open and I think that's -- those kind of long-
22 term collaborative changes is what's really going to fix
23 things for CABEC memberships and help give us CABEC members
24 an avenue for making the appropriate changes.

25 So I had two specifics that I wanted to add into

1 the docket. First one, there is an issue with the 2015
2 change to the Federal water heating standards where on the
3 tankless heater it got pumped up to a .82 Federal standard
4 as ostensibly the comparison case. It took me four emails
5 to CEC staff and Gina Rodda of Energy Code Ace until I
6 could figure out exactly how the standard in the compliance
7 software was handling that change.

8 It's unclear in the language the way that it's
9 written in that the way that it's currently handling it is
10 that the .60 -- or there's an equation there, but it ends
11 up being a .60 tanked gas water heater still stays as the
12 standard case even when the proposed is a tankless, which
13 is not clear because of the Federal change. It's not
14 written specifically. And then there's a clause that if
15 it's multifamily central then you in that one specific
16 instance, then you do get compared to a .82 tankless. So
17 that language I think, needs clarification in the Standards
18 itself.

19 The other issue that I wanted to bring to light
20 involves the HERS registries and for HERS Raters
21 documenting when a CF-3R was performed and filing that.
22 Right now there is, somewhere in the language, that the
23 intention is the date filed is the day that the field
24 inspection happened. But what happens in truth in the
25 field is that most of the time, it's the day someone in the

1 office eventually puts it into the computer. And I think
2 that language needs to be clarified. The utility programs,
3 incentive programs rely heavily on that date for
4 eligibility reasons, for program eligibility and ensuring
5 that public rate fare funds are distributed properly and to
6 our rules. And having that date confusion makes it
7 significantly harder on program implementers of the
8 incentives.

9 So clarifying the language and making sure that
10 it's clear at the registry point, at the point of signature
11 that this is intended to be the day of the field
12 inspection, not the date of entry, would be a nice
13 clarification that could help some portions of the
14 industry. And thank you again for what you guys are doing
15 with this change in opening this proceeding.

16 I also wanted to say one final thing, keep it
17 open into 2017, because these projects, the 2013 Code
18 projects are still being worked on. They're being put into
19 the field, they're being field verified inspected deep into
20 2017 even after the new code has technically been enacted
21 for new permits. So thank you.

22 MR. STRAIT: That's a good point, thank you.

23 MS. MACDONALD: Thank you, that's a really good
24 suggestion.

25 And the comment about the documentation for the

1 CF-3Rs, I know Charlie and Mike Goshen (indiscernible)
2 aren't here. That's actually an ongoing conversation
3 (indiscernible) and George, we are having within the HERS
4 OII is that exact language about specific input times,
5 approximate to testing dates. So thank you.

6 And I now have someone on the phone, Neil --

7 MR. MILLER: Hi, my name is Neil Miller and I'm
8 the CEO of American Lighting. We've been at this since
9 1986 and over the years we've installed over 20,000
10 different projects across the entire state. We've received
11 numerous rewards or numerous awards from NetDD, (phonetic)
12 Southern California Edison, PG&E for the work that we've
13 performed. And our entire business model is centered
14 around energy efficient lighting.

15 And I wanted to take just a minute to speak to
16 the real world impact of the 2013 Standards and how they've
17 affected contractors such as myself. We've invested
18 heavily in training with literally hundreds of hours at
19 different seminars and conferences. I have two certified
20 APs on staff. All my salespeople and all my management
21 understand the Standards. But what I really wanted to tell
22 you is what's the real world impact of a company like ours.
23 And here's three simple facts: since July of last year our
24 sales are off by 50 percent. I personally have laid off
25 over 25 percent of my workforce. And we project to close

1 as a company before the end of this year.

2 I'm a pretty smart guy. And I'm a pretty smart
3 businessman, but the State of California has made it
4 impossible for contractors such as myself to survive. We
5 don't do projects, because they're nice for the environment
6 -- that's a nice side benefit -- but we do projects,
7 because they make financial sense for customers. We
8 approach business owners, commercial businesses and
9 commercial business owners and we give them the idea to do
10 a lighting project. They do it or they don't do it,
11 because of the financial impact that it has to their
12 wallet. When it has a payback that makes sense they pull
13 the trigger and they sign the contract. When it doesn't
14 make financial sense they don't sign a contract. It's very
15 simple mathematics.

16 With the ridiculous new requirements that were
17 put in place last year it no longer makes sense for most
18 business owners. Does make sense for some business owners
19 or some schools who are heavily funded by Prop 39 money?
20 Absolutely. But the average business owner, the average
21 building owner in California it no longer makes sense to do
22 a lighting project if they have to comply with the 2013
23 Standards.

24 It's a real shame that -- and I find it really
25 ironic that our having to put Standards in place to provide

1 more energy efficiency, at least in the lighting world, is
2 going to be what ultimately kills our industry. I have
3 several friends here who've already left the industry and
4 it'll be a sad day when we close our doors.

5 Thanks for allowing me and others on the phone
6 and there (indiscernible) that are there in the audience
7 (indiscernible) feedback today. I appreciate that part of
8 the process.

9 MS. MACDONALD: Thank you for calling in. Mazi
10 has some comments.

11 MR. SHIRAKH: Thank you for your comments.
12 Again, we're aware of the issues and we've been working
13 with the industry. Unfortunately, I wish we were having
14 this discussion six months ago instead of today.

15 At any rate, we just heard from a manufacturer
16 that in response to the 2013 Standards they have developed
17 new products that have integrated controls in them, that
18 doesn't require new wiring, that they can be wireless. I'd
19 like to --

20 (Overlapping colloquy)

21 MR. MILLER: (Indiscernible) with all those
22 products and the other products that are on the market,
23 I've installed many of them. Unfortunately from a price
24 point perspective and from a "does it make financial sense"
25 it's not there. She can attempt to sell you on what she's

1 trying to sell. If it made sense they'd be selling them.
2 The only way to sell a lot of products is by Standards such
3 as the ones that you're discussing being forced into the
4 market.

5 MR. SHIRAKH: So you feel the costs of the
6 products are still too high to be cost justified?

7 MR. MILLER: Absolutely, positively yes.

8 MR. HARGROVE: And I'd like to follow up with
9 that --

10 MR. MILLER: A lot of products that makes sense,
11 but it's criminal and a shame that we're not allowed to go
12 out there and install the products that do currently make
13 sense right now. LED, the greatest technology within the
14 lighting industry since the invention of the incandescent
15 light bulb, is actually being held back in California
16 because of the ridiculous new requirements. That is
17 criminal.

18 MS. MACDONALD: And we have another -- thank you
19 Neil -- there is another commenter.

20 MR. MILLER: Thank you. Thank you so much one
21 more time for letting me speak up today.

22 MS. MACDONALD: You're welcome and again, I
23 appreciate you calling in.

24 Go ahead.

25 MR. HARGROVE: And I'd like to follow up to that

1 call and Mazi's comment -- we're here. My name is Mathew
2 Hargrove, the California Business Properties Association.
3 We've been participating in Title 24 Code regulatory
4 writing processes. I think you guys say we complain about
5 them, but we've been participating ever since I've been
6 working here for ten years.

7 We've been saying over and over and over again,
8 that the codes you guys are writing are not working out in
9 the field. We don't think that you guys are actually
10 looking at real cost effectiveness. While we think that
11 the cost effectiveness that you're applying is way too long
12 for the commercial real estate industry that is basing
13 their decisions on business considerations, not on
14 environmental considerations. And you are stretching out
15 the payback period for these things in theoretical terms to
16 the point where it doesn't make sense for many small
17 companies.

18 I represent very large companies and this last
19 Code adoption that you guys did, was a 28 percent jump in
20 the energy efficiency for the largest state in the nation,
21 28 percent jump. We said at the time we think we're going
22 to have issues with getting product, with actually
23 understanding the complicated code. We've said throughout
24 the years that the Code is so complicated now that folks at
25 the planning desks who used to help our companies work

1 their way through a project, can't do it anymore. We have
2 to go out and we have to hire specific companies for just
3 lighting jobs, because it is so complicated that we have to
4 contract out the ability to meet the baseline code in the
5 State of California. And that's what we're talking about
6 here. I know folks earlier said we don't want to
7 backslide. Well, we would say -- our industry would say
8 that the code maybe has jumped ahead a little too much for
9 a baseline code.

10 And that, you know, it's great for the State to
11 be the most energy efficient in the nation. We are and
12 we're proud of that, but what we would say is let's course
13 correct a little bit. And let's make sure that the code
14 that every job in the State of California has to meet is
15 actually a baseline code.

16 And one of the things that -- you know, I'm
17 usually the only one coming here complaining on behalf of
18 the commercial real estate industry. And one of the
19 complaints we have is that a lot of times the folks who
20 actually have to pay for this are not part of the process
21 here. And a lot of times we think that we're not invited
22 to be part of the process or we don't go out the way,
23 because we're continuously saying, "Run your codes through
24 a cost-effectiveness model."

25 Now, I don't think that the cost-effectiveness

1 model that you had on the lighting control issues when you
2 adopted this, and when the Energy Commission adopted this,
3 is bearing out to be true. Is it? Is it anywhere close?

4 UNIDENTIFIED SPEAKER: No.

5 MR. MATHEWS: I mean, we were told \$3.00 or less
6 for the lighting controls. Actually jobs now, we're seeing
7 10 to \$14 for just this little piece of the code. And what
8 that is doing is it's avoidant. You're seeing tenants now
9 avoiding these jobs, very large tenants. I spoke in San
10 Francisco last week about this. And I had brokers, who
11 normally when I speak in San Francisco to the groups I
12 represent they don't really care what the Energy Commission
13 is doing, because they're already doing it in San
14 Francisco. It's been a fun joke for years. I don't even
15 need to go talk to San Francisco, because they're doing all
16 the green stuff and they're doing all the energy efficiency
17 stuff.

18 The fact that I had a luncheon meeting there last
19 month, we had 40 people show up to it, and they were all
20 scratching their heads saying, "This lighting control
21 stuff, this new Energy Code is causing our tenants to have
22 sticker shock and they are backing out of projects." Now,
23 these aren't building owners that are coming up with these
24 numbers. These are building owners that are working with
25 many of the contractors in this room.

1 We turn to the contractor and say, "We want to
2 get a TI done." Now, it's been ten years that our sixth
3 floor tenant has been there. We need to refresh this
4 space. We need to modernize it a little bit. And in past
5 years there's been some grumbling, but we've been able to
6 do that. We are now, as the contractor hands the costs to
7 the tenants who are making the decisions in this case on
8 that type of TI, it's not even the business owner, we are
9 seeing folks back out now. And say, "Well, we can't do
10 that. We can't afford all of this new lighting control
11 stuff. We can't afford to meet the whole code. Why don't
12 we put up a fresh coat of paint, put in some new carpet,
13 and call it a day?" That's having a backslide on energy
14 efficiency in the State of California.

15 So I know you guys want to get really specific on
16 what's really hurting you on the Code? What I'm saying is
17 let's take a step back. Let's take a step back and see if
18 maybe on the whole, the Code has become a little too
19 complicated and a little too forward thinking for it to be
20 a baseline code.

21 Also, at some point here a lot of the stuff
22 that's in this code for new construction is not a problem.
23 And I just want to be clear here that we are supportive of
24 California continuing to move forward, but what we're
25 seeing is a big split between new projects and between TIs.

1 And at some point we need to consider what happens with
2 those TIs, all the energy savings that are potentially
3 being lost out of cost avoidance on the older building
4 stock. That's the whole AB 758 discussion that we're going
5 to have.

6 And it's really easy -- you know, a lot of folks
7 who just want to keep pushing forward to zero net energy,
8 just want to say, Well, mandate it. Who cares?" Well,
9 this room is full of people who care right now, because
10 we're seeing the market react. And the market is reacting
11 negatively to a lot of this stuff.

12 So our plea is let's look at more cost
13 effectiveness and maybe some of the cost effectiveness is
14 just looking at different ways to comply with the Code. I
15 don't know, I'm not smart, you've got -- in that way you've
16 got a lot of good comments here. But overall for the
17 industry we want to make sure, you know, that folks who own
18 these buildings aren't making these cost decisions.
19 They're going out many times to the folks in this room and
20 you're seeing a negative reaction from the tenants. And
21 the tenants are never here represented. But they
22 ultimately are the ones who are making many of these
23 decisions on the Energy Code, because they're the ones who
24 are saying yes or no to reconditioning of space.

25 So with that I'm not sure if this part of the new

1 dimming requirements under the Code.

2 MR. STRAIT: Well, we'll call it a feature, why
3 not?

4 MR. HARGROVE: But if so it's working, it looks
5 pretty good.

6 MR. SHIRAKH: It's working this well,
7 (indiscernible)

8 MR. HARGROVE: And actually I think, you know, a
9 piece of this is -- and I've said this -- you guys have
10 heard me say this before is we invite the staff from the
11 Energy Commission to come work on a project. Come ground
12 truth your codes.

13 And when is the last time, you know, this
14 building went through -- could this building go through the
15 2013 Code right now for a TI? How much would it cost? I
16 think that that would be a fantastic exercise. It's just
17 have the folks who wrote the code and adopted it go through
18 the exercise of what it would take to TI just this room.

19 And I think a lot of when you ask what are the
20 specifics -- will come out in the wash on that. And you'll
21 see where some of the difficulty is, but again, thank you.
22 I don't mean to sound too negative, but I've gotten more
23 hammered by this than any other issue since I've been
24 working at CBPA, is this new code. And nobody knows where
25 to turn and it's a big cost and hopefully it's all going to

1 work out in the end. But thank you very much for having
2 this. Thanks for hearing my complaints throughout the
3 years. And to the extent that we can get more involved we
4 want to, and we look forward to working with you. Thanks.

5 MR. SHIRAKH: Thank you, Matt. We have some
6 comments, Rachel?

7 MS. MACDONALD: Thank you, I have a follow-up
8 question for you though.

9 MR. STRAIT: Before we do that --

10 MS. MACDONALD: Yes, sorry.

11 MR. STRAIT: -- I'd like to jump in really quick.
12 I didn't want to speak to the question specificity -- it's
13 part of where we're asking for specifics is in these kinds
14 of price information. So that we can see where our cost
15 estimates will be made before the Code goes into effect and
16 these costs that people are actually encountering in the
17 field now align. So where people say controls are too
18 expensive, controls are an entire galaxy of different kinds
19 of products doing a whole variety of different things. We
20 just want to drill down into that, so that we can attach
21 specific prices to specific technologies and try to match
22 that back to what we calculated before. And see what we
23 can true up.

24 MR. HARGROVE: It's nebulous, so I'll tell you
25 it's nebulous. And a lot of this is the Energy

1 Commission's pointing at the locals, the locals are
2 pointing at the architects and at the Energy Commission.
3 And the building owners and the tenants are kind of caught
4 in the middle between groups who can't give us an answer on
5 what stuff costs. We think it has partially to do with how
6 you interpret the ten percent issue. We think it has
7 partially a little bit to do with the new lighting controls
8 and the wiring. But we can't get -- we get different
9 answers in different jurisdictions.

10 And I think a piece of that is that the Energy
11 Commission is not doing the type of education and training
12 that it did ten years ago on this. Now, whether or not
13 you're doing the same man hours or not is a different
14 question as to whether or not what you're trying to teach
15 locals might be so much more complicated that it's
16 difficult to understand.

17 We also know that local planning desks have many
18 less people at them than they did ten years ago, so I think
19 it's a combination of that.

20 And again, when we point to some specific dimmers
21 of course you're going to have a lighting contractor say,
22 "Well, those aren't that expensive if you get it from this
23 manufacturer over here and if you buy them in bulk," and
24 all that. But where I think a lot of our difficulties are
25 coming in at action on the ground is just confusion on the

1 "what applies" "what triggers requirements."

2 And some of the stuff is pretty advanced,
3 especially when you get into the dimmers and you get into
4 the second zone stuff. Somebody said they're doing a
5 dentist office in a strip mall; those are some pretty
6 difficult codes to meet when you're trying to do that type
7 of medical office building and you're not a huge company.
8 And you don't have an entire engineering department there.

9 So we do have specificity. And Mazi is talking
10 with our folks and we do have a letter in, but again I just
11 wanted to make the kind of general comments, because --

12 MR. STRAIT: Okay. This was more, also not a
13 comment to your things, but just to better communicate to
14 folks that are going to be commenting also that that's one
15 of things that we're trying to drill into.

16 MR. HARGROVE: We would say more education, more
17 training. And we think the State could take a breath an
18 entire cycle, focus on implementing what you adopted for
19 2013. And you would probably see more energy savings
20 overall, because more people would be able to meet the
21 Standards instead of worrying about the next Standard
22 coming up and freaking out and fighting about that.

23 MS. MACDONALD: Thank you.

24 We have someone on the phone by the name of Paul.
25 Paul?

1 MR. BONY: Yeah, just that -- can you hear me?

2 MS. MACDONALD: Yes, I can hear you. Go ahead.

3 Now we can't hear you.

4 (Audio difficulties with Mr. Bony)

5 MR. BONY: Can you hear me now?

6 MS. MACDONALD: Yes, we can hear you now.

7 MR. BONY: Okay. So I'm Paul Bony, I'm the
8 Western Territory Manager for ClimateMaster. We make water
9 source and ground source heat pumps.

10 I've written comments earlier this week, but I
11 want to follow up on your offer to have (indiscernible) So
12 we have this state legislative mandate to include ground
13 source heat pumps in Title 24. But the HERS/software-based
14 process doesn't recognize the ground source heat pumps. So
15 we have to go through major hoops to work around that. And
16 that's in spite of the fact that we're the most efficient
17 heating and water heating available.

18 We have built a machine like other manufacturers
19 that meets California's goals. Our top-of-the line
20 residential product delivers ERs 45. (phonetic) It can
21 deliver a COP of 5.1 on heating. It can deliver 100
22 percent of domestic hot water (indiscernible) COP. It
23 (indiscernible) two-ton machine in Sacramento for a two-ton
24 load can deliver 80 cooling and 100 percent of domestic hot
25 water in Sacramento for about 200 kWh a month. That same

1 thermal load could beat this (indiscernible) or slightly
2 smaller EV system. But our machine isn't a drop-in with
3 the HERS Title 24 software, so a customer who wants to
4 install that can't pick that different choice, get their
5 building permit and get their construction started.

6 And as a result of these barriers Iowa installs
7 more ground source heat pumps than California. Now, my
8 grandfather moved from Iowa in the 1920s. He was a city
9 engineer in Venice. And I think you would be shocked to
10 think that his home state with very few people install's
11 more high-end technology than in all of California.

12 What is the process to form a roundtable, sit
13 down with the CEC staff and fix this, so a super-efficient
14 product that can be run with no carbon footprint, no
15 consumptive use water, can become an easy selection for a
16 building designer or homeowner in California?

17 MR. SHIRAKH: Yes, this is Mazi with the Energy
18 Commission. And we're actually right now working with the
19 manufacturers of a different product, the mini-splits, who
20 basically had the same issue that you have; that they had a
21 new product that we could not accurately model in our CBECC
22 grids (phonetic) software. And what these folks have been
23 doing is as an industry they approached the Energy
24 Commission and they came up with some resources. And so we
25 have partnered with them along with the utilities and we're

1 going through a research process to basically answer many
2 of the operating issues in the field and also come up with
3 commissioning and installation issues that they may
4 encounter.

5 Then we need to do the same thing with the ground
6 source heat pumps. And I've been at the Energy Commission
7 a long time. I know we've been having this discussion with
8 your industry at least for the last 20 years. There are a
9 lot of issues that need to be resolved and it's a
10 complicated system you have. You know, how does the ground
11 coupling interface with the outdoor unit and how does the
12 soil issues impact the water temperature in the different
13 climate zones. So we need to basically work through all of
14 these issues and then after that we can basically
15 incorporate the results into the CBECC gray zone (phonetic)
16 And basically have you model it the way that it's
17 performing.

18 But again to do that I would like to use the
19 process that we're using with the mini-split manufacturer
20 as the template and we need to follow the same procedures.

21 MR. BONY: So what is the action plan to
22 implement that process?

23 MR. SHIRAKH: I could not understand --

24 MR. BONY: Rather than a workshop (indiscernible)

25 MS. MACDONALD: What he's asking is what are the

1 next steps I believe?

2 MR. BONY: We can't get started. We've been
3 trying to get started for years and you say, "You're right,
4 we need to work on this." And we submit more comments. We
5 have more sessions like today. That's not the question.
6 Can we have some order as to start the process and say
7 here's the punch list, here's the date that we're all going
8 to sit down, here's the activities. I mean, what do we
9 have to do to get on the -- do it?

10 MR. SHIRAKH: Bill Pennington is going to answer
11 your question.

12 MR. PENNINGTON: Hi, this is Bill Pennington. So
13 the Legislature a long, long time ago established the
14 policy that whenever new technologies are coming along to
15 be introduced into compliance software for the performance
16 approach, that the proponents of the technology actively
17 sponsor the work. And in most industries that has
18 happened, I think, in the course of the 20 years that Mazi
19 has described. Your industry stands apart as sort of not
20 sponsoring the work and not getting through the process
21 with us.

22 So we have a certification approach for doing
23 alternative calculation method approvals. And the
24 engagement that we're seeing that Mazi was talking about
25 before with the mini-splits and multi-splits manufacturers

1 is a clear example where the industry can step up, engage,
2 and bring forth the information that they have about the
3 performance of their equipment. And we would welcome a
4 similar kind of approach with the ground source heat pump
5 industry.

6 So in terms of what do we do, we need to have a
7 conversation with you and get into the specifics about how
8 do we walk through that process?

9 MR. BONY: Okay. So can you out a letter or an
10 email. "Here's the point person, here's the name."

11 MR. SHIRAKH: What I would suggest is for you to
12 send me an email. The person that would be the contact for
13 you would be Mark Alatorre and then we can start from
14 there. But again what Bill is saying is if an industry
15 doesn't step up, the work is not going to get done.

16 MR. BONY: Well, let me -- I don't understand
17 what that means. Does that mean you need a \$300,000 check
18 to hire the guy who owns the license to the software
19 (indiscernible)

20 MR. SHIRAKH: No, it's not a check. But I mean
21 that's --

22 MR. BONY: What does that mean, what --

23 MR. SHIRAKH: We can talk about the specifics, I
24 think, after this meeting. There is a process other
25 manufacturers have followed and they are following it, and

1 then we do get (indiscernible) it's not an alien process.
2 I think we can have that conversation next week, we don't
3 need to spend time on this, on the specifics on these
4 procedures.

5 MS. MACDONALD: Mazi, I'll add we have a lot of
6 comments on the docket and I believe individuals in the
7 audience here for the thermal heat pump group. And so I do
8 agree with the suggestion.

9 I think what the group is looking for is to have
10 confirmation that we will engage, whether I think it was
11 just mentioned like a meeting or a workshop. And I can't
12 speak for Mazi's group, but that would be typically be one
13 of the steps, you know, once you guys make contacts and
14 engage with stakeholders and the Energy Commission staff.
15 There's many things that can occur and it would be publicly
16 noticed. That's how you would hear about it typically, our
17 activities for specific topics are often noticed through
18 processes.

19 MR. SHIRAKH: We can work with --

20 MS. MACDONALD: But what Mazi is indicating is
21 they're listening and they're willing to engage.

22 MR. BONY: Okay, well, we know everybody's been
23 listening (indiscernible) for seven years that I've had
24 this manufacturing job. And what I'd really like is a
25 commitment to fix that. I mean there's just been lip

1 service. I hate to be harsh, but we have not had anything
2 other than just part of your problem is we've got this
3 great technology that won't come into the State, because
4 you won't embrace it. And until you say, "Let us help you
5 come to our state", there's 49 other states that we won't
6 have to fight to sell our products.

7 MR. STRAIT: Hi. This is Peter Strait, I'm the
8 supervisor in our Building Standards Unit here. I'm fairly
9 new to our office. I'm closing in on a year pretty soon
10 here.

11 It sounds like to me, as I'm new to this, this is
12 a process that has been started before, but hasn't -- like
13 it's gotten to a certain point and gotten interrupted.
14 It's gone to a certain point and something broke. And
15 we've haven't managed to keep moving forward with it.

16 MR. SANGUINETTI: No. You just don't understand
17 ground source heat pumps.

18 MR. STRAIT: Right, so --

19 MR. SANGUINETTI: I mean, Mazi right there said,
20 "We don't even know how the ground interfaces with the
21 machine."

22 MR. BONY: (Overlapping colloquy)

23 MR. STRAIT: Hey, Paul?

24 MR. BONY: And I just don't know how.

25 MR. SANGUINETTI: Paul? This is Bruce

1 Sanguinetti, I'm with Sierra Eco systems. We're the
2 largest installer of geothermal heat pumps in the Western
3 United States. We've installed 700 systems. In just the
4 last two or three years we've installed over 100 in
5 California and that's more than all the other installers
6 combined. And Paul can attest to that.

7 Monty just said, "We even know how the ground
8 interfaces with the machine." Why is that important? You
9 don't care how the air interfaces with his machines. What
10 happens when a mini-split gets into a 114-degree Phoenix,
11 Arizona weather? It changes its performance. The ground
12 water coming in from the ground comes in at a higher
13 temperature. The interface is the same. That part's not
14 necessary.

15 So we can sit down and quickly come up with
16 Standards. ASHRAE already does all laboratory testing.
17 All the machines are ENERGY STAR. All the laboratory
18 information is there. It's an easy, very simple process to
19 get this added. But it has been very tough.

20 I have to go into every county. I'm signed up in
21 22 different counties. And I've got a county a month in
22 California. We have to sit down with the building
23 inspectors and actually train them on ground source heat,
24 so that they can adopt them. It's very arduous and not
25 that way anywhere else.

1 So I look forward to sitting down with Mazi and
2 Bill and what was your name?

3 MR. STRAIT: My name is Peter.

4 MR. SANGUINETTI: Peter, I will spearhead that
5 meeting, because it's a very simple process. It's your
6 grandmother's root cellar that heats and cools your house.
7 It's that simple. Thank you.

8 MR. SHIRAKH: So again, all we're saying is
9 there's a process. We can do this and we have been doing
10 this. We're doing exactly the same thing with the multi-
11 splits and mini-split system. We can follow the same path.
12 We can do this.

13 MR. STRAT: Yeah, and all I was going to say is
14 what I can promise right now is we'll start that process.
15 And we'll try to figure out what we can do now to make sure
16 it doesn't fall off the rails or that process doesn't stop
17 short again. I can't speak to history without going back
18 and researching what happened before, but absolutely.

19 MS. MACDONALD: Thank you.

20 MR. BONY: First, there's a lot of folks that
21 would like to do this and we need your help. We want to
22 partner with you, but it's been a very frustrating process.
23 I can't ask for any more than your commitment.

24 MS. MACDONALD: Thank you. Well duly noted, I
25 did just look over a folder I have. And I know that folder

1 is full of dockets from this proceeding and half of them
2 are from geothermal epochs, so I know you're very
3 passionate about it. And I appreciate you calling in.

4 And I do have a gentleman at the podium right now
5 patiently waiting so please go ahead.

6 MR. ZHANG: Sure. My name is Yanda Zhang, with
7 TRC Energy Services.

8 To the comments related to lighting alteration
9 code requirements. So over the years we have been doing
10 study supporting utility and CPUC, energy efficiency,
11 market studies, evaluation, policy analysis, program
12 planning. So I'd just like to offer some observation of
13 some of the market trends and policies related to this
14 issue.

15 One particular one is a recent CPUC potential
16 study, which looked at the savings potentials for different
17 measures. One of the largest components for utilities
18 Energy Efficiency Program is the new lighting retrofit.
19 What they find is that there is going to be substantial
20 reduction in savings potential over the years. This was
21 done before the 2013 Title 24 was actually adopted. So the
22 study does not even reflect the 2013 Title 24 effect
23 meaning that there was market trend already there showing
24 savings that it's going to reduce for this market sector.

25 Utilities planning -- if you compare utilities

1 filing or planning for efficiency programs you also notice
2 from 2010 (indiscernible) program cycles to '13-to-'15
3 program cycle there's huge reduction in lighting alteration
4 savings. A market in a sense, you might think is
5 shrinking, again utility planning is not taking into
6 consideration the 2013 Title 24. So what is the reason?

7 It's getting more complicated, but we think one
8 of the major reason is allowed savings. That CPUC allowed
9 a utility to claim what they called unit end savings or
10 savings per lighting fixture.

11 Now, a lot of savings are calculated are based on
12 fixture being installed compared to a baseline fixture. A
13 baseline fixture usually will be Federal minimal standards,
14 appliance efficiency standard, or what the CPUC calls
15 "industry standard practice". Well, they take into
16 consideration a portion of the industry isn't taking a more
17 efficient product versus the Federal minimum product.

18 So the reason for this savings reduction, what we
19 observed, is we've been seen a tremendous increase of the
20 baseline efficiency, meaning mostly because of Federal
21 standards, has been increased for fluorescent lamps. And
22 therefore, the savings allowed to be claimed will be
23 reduced, also means the incentives allowed to be paid to
24 customers is also being reduced accordingly. Then you can
25 see there is going to be a big reduction in terms of how

1 you can encourage customers to install efficiency fixtures,
2 because the baseline is already high up there.

3 Now keep in mind the Federal standards adopted
4 use the cost effectiveness is not based on, for example,
5 three or four or five paybacks in Federal standards is
6 adopted with (indiscernible) is probably as stringent as
7 California. But at least it's based on a lifecycle cost
8 based on the product or the practice instead of just the
9 industry practice.

10 If you look at the last couple of years that
11 criteria is since getting more stringent. And now the
12 Federal actually includes the price prediction including
13 learning curve effect. I don't want to go deep into that,
14 but the fact is that baseline is going to be increased or
15 has been increased based on very, very stringent cost-
16 effect criteria. This is a market factor, I think everyone
17 needs to pay attention to.

18 And also the point is that because of this, what
19 the challenges the industry faces may not be able to solve
20 by way of discussing here, the Title 24 issues, because
21 those are Federal appliances standards issues. And even if
22 you let go the stringency on the Title 24 side then CPUC is
23 going to still stick with their policy using Federal
24 standards or industry standard practice. So you may not be
25 able to solve the problem by loosening up the requirements.

1 And another major factor is we also need to
2 recognize that lighting alterations including by launch two
3 major categories. One is a simple change-out, what I think
4 we call a luminaire component modification, which is
5 basically kind of a lamp ballast replacement. And that
6 area in particular is going to effected by the Federal
7 baseline heavily.

8 But the other part of the alteration component is
9 the system alteration or I think the code more describes it
10 as the luminaire entitlement alteration. It is true we're
11 going to see some difficulties or challenges in this area
12 that you have luminaire alteration along with the controls.
13 For example, the studies we did for NEA, (phonetic) we
14 looked at the northwest area, the lighting alteration
15 market characteristics. The thing we just did is we
16 interviewed different market actors to see what the driving
17 force is to what are the barriers to adopt more efficient
18 standards.

19 First thing we noticed is that -- there is two --
20 that a lot of people are implementing control measures, but
21 we also noticed a lot of contractors, they just have a lack
22 of knowledge. So the cause for example of analysis, we
23 think that from the code analysis point, and we know that
24 we use the reasonable cost, but it's also true there's a
25 portion of the industry that maybe doesn't have enough know

1 how; that their actual cost is actually higher than
2 necessary. I mean, certainly more study needs be done to
3 more clarify, but this is for sure one of the factors I
4 think we need to consider.

5 The other side is we think we definitely
6 encourage you, CEC, to work with CPUC specially on policies
7 related to lighting alterations -- in particular the system
8 alterations. I don't think there's enough incentive or
9 policy supporting this area. So this is probably also the
10 pen (phonetic) is going to reflect it for the industry.

11 The second issue is also related. I probably
12 also want to touch upon the earlier comments about
13 compliance issues, and it sounded and at least it gave me a
14 feeling, that it's completely failing the market. And we
15 have no compliance, from the earlier comments. Well,
16 believe it or not if you look at CPUC's evaluation of 2005
17 Title 24 and 2008 Title (indiscernible) compliance, they
18 show a high compliance rate for both res and non-res and
19 the code. In particular, they looked for 2008, the
20 lighting alteration compliance rate where they sampled, I
21 forget, maybe 80, 90 buildings. And on average they're
22 saying they're all beating the code. So I think there's
23 maybe (indiscernible) at least what CPUC is saying in all
24 of the market practitioners here and reflected here.

25 So I again encourage CEC to take all this

1 information into consideration, to work with CPUC to get a
2 better understanding of the market in terms of making
3 decisions for 2016 code changes. Thanks.

4 MR. STRAIT: Thank you.

5 MS. MACDONALD: Thank you. I have someone
6 standing to make comments or are you standing by the door?

7 MR. DOYLE: No, I'm here to make a comment, but
8 you've got somebody on the phone?

9 MS. MACDONALD: I do have someone on the phone,

10 MR. DOYLE: Then I'm passing up my spot, but I
11 know you do go back and forth.

12 MS. MACDONALD: Okay. On the phone -- just hold
13 on just a second. I know we have a Leslie on the phone,
14 just a moment after our gentleman here. Go ahead.

15 MR. STRAIT: Well, you've got to give him the
16 mic.

17 MS. KRAMER: Hello, can you hear me?

18 MS. MACDONALD: Oh Leslie, hold on just a sec,
19 sorry.

20 MR. DOYLE: I mean it's no big deal. She can go
21 if she wants. That's fine.

22 MS. MCADAMS: Okay. Leslie, go ahead.

23 MR. DOYLE: Ladies first, I mean that's fine.

24 MS. KRAMER: This is Leslie Kramer of Stanford
25 University and I represent an end user and wanted to let

1 everyone know that we support what Ecology Action was
2 saying earlier about the proposed changes to the
3 nonresidential lighting requirements that effect the
4 lighting retrofits. And I guess I wanted to speak more
5 narrowly than new construction or tenant improvements. I
6 want to speak specifically about the part the 2013 Code
7 that requires a trigger requirement for compliance for
8 replacement of lamps and ballasts. Because it's been our
9 experience that the requirements, as they're written in the
10 2013 Code, are giving customers the option of just doing
11 nothing. When it comes to new construction or tenant
12 improvement it's unlikely we would postpone a project,
13 because of those difficulties of complying with the
14 lighting requirements. But it is very likely that we would
15 postpone, and we have been postponing ballast replacement
16 projects, because of the new code requirement.

17 And I think that's happening across the industry.
18 So I just wanted to maybe support some of the direction in
19 efficiency exemptions for retrofits that improve luminaire
20 efficiency by 20 percent. I think that addresses a lot of
21 the concerns that we have. And we'd just like to see it go
22 into effect sooner, rather than later. And if anyone wants
23 to get into more specifics as to why the requirement are
24 increasing the cost of the project for us to the point of
25 not getting our payback criteria. But I'd just like to

1 speak and that's what I'm calling to comment on myself. .

2 MS. MACDONALD: Thank you, Leslie.

3 MR. STRAIT: Leslie, one quick question. What is
4 your payback criteria, if that's just a simple metric that
5 you could explain?

6 MS. KRAMER: Well, one of our leading programs
7 has a five-year payback criteria for retrofitting lighting.
8 And so that's where we're coming from.

9 One of the other factors is that we also have a
10 group reballasting program that delivers energy savings
11 that are partially supported by the five-year payback and
12 partially supported by maintenance benefits. But those
13 projects are being held up, because of the complexities
14 that are being introduced by requiring permits. And the
15 same level of rigor for us for simple replacement of a lamp
16 and ballast is what was required for new construction and
17 TI work.

18 So group reballasting efforts, which a lot of
19 large customers are probably doing, we've combined those
20 group reballasting projects with upgrades to more efficient
21 lamp ballast. And in some cases, we'll be looking at LED
22 replacements as well, but the requirements that are imposed
23 for controls on top of these improvements to the efficiency
24 of the luminaires incrementally, is not cost effective for
25 us. To get so much benefit from improving luminaire

1 efficiency and reducing our watts per square footage it is
2 our experience the incremental benefit of putting in
3 control strategies, in terms of dimmable ballasts and/or
4 occupancy sensors and daylighting sensors, increases the
5 cost per square foot significantly. And where it was
6 already cost-effective to put in those controls we've
7 already done so. But incrementally on top of the
8 reductions in efficiency they're just not cost-effective.

9 Additionally, the cost of engineering time to
10 comply with the code is another significant factor. You
11 have to have an engineer assess what your current status
12 is, and then what the requirements will be for compliance
13 on a room-by-room basis, which is an additional cost to our
14 project.

15 MR. SHIRAKH: This is Mazi. Hi Leslie, long time
16 no hear.

17 MS. KRAMER: Hi.

18 MR. SHIRAKH: Have you -- I mean, one of the
19 things I think we will all agree is that the 2013 code, the
20 way its written, it is difficult to understand. And I
21 think we all recognize that. So we are trying to solve
22 that problem in addition to others.

23 Have you seen the latest revision of the proposed
24 language that's been floating around for the 2016 yet?

25 MS. KRAMER: Yes, we've reviewed that and then we

1 support it. We think that addresses most of our concerns.
2 It's just that most of our concerns is the gap period
3 between now, and if that does get approved, how we will run
4 our lighting retrofit programs in the interim.

5 MR. SHIRAKH: I understand. Thank you.

6 MS. MACDONALD: Thank you, Leslie. I have a
7 question at the podium.

8 And then also I have a question about lunch
9 break, which I want to poll the people on the phone who
10 have questions. I saw Mark Gallant's name pop up. I know
11 you had filed a docket. I recognize the name. And then
12 how many more questions in the audience?

13 Okay. So it looks like we will probably be
14 taking a break for lunch. Did you want to -- I saw you
15 stand up. I'm sorry, I don't know your name.

16 MR. MCHUGH: John McHugh.

17 MS. MACDONALD: John McHugh. Okay. I'm just
18 going to poll the room about taking this comment and then
19 maybe breaking for lunch and reconvening.

20 MR. SHIRAKH: But usually when you break for
21 lunch, a lot of people don't come back. So if we can stay
22 here for another -- my suggestion.

23 MS. MACDONALD: My thought is are we going to be
24 able to work through this until 1:00?

25 MR. SHIRAKH: That would be my suggestion.

1 MR. STRAIT: Order pizza.

2 MS. MACDONALD: Order pizza? You want to keep
3 working?

4 (Colloquy regarding lunch break)

5 MS. MACDONALD: Okay, so we will self-govern.

6 MR. STRAIT: So for now let's continue here.
7 Let's get continue with the comments for now.

8 MS. MACDONALD: We'll continue the comments.

9 MR. STRAIT: We will readdress the question when
10 we hit 12:30 and then if need be we'll push through that
11 until 1:00. If at 1:00 o'clock we still want to keep
12 working we'll go ahead and go have lunch. If by 1:00
13 o'clock we've decided we want lunch we'll get lunch. But
14 let's just take a few comments, get to 12:30, take a few
15 comments, get to 1:00.

16 MS. MACDONALD: Thank you, Peter.

17 Okay. Podium.

18 xxx

19 MR. DOYLE: Well, I'd like to thank everybody for
20 putting me on before lunch. That doesn't stress me out at
21 all.

22 With that being said, my name is Chris Doyle.
23 I'm with the Santa Clara County Joint Apprenticeship
24 Training Committee. I've been teaching acceptance
25 technicians for almost two years now. When I heard that

1 this forum was going to come up, I was pretty excited about
2 getting in front of some other people and sharing some
3 ideas.

4 So one thing that I've noticed that is a general
5 consensus amongst everybody in here is that really the lack
6 is in communication. And that we're trying to structure,
7 at least in my own class and I'm guessing amongst all of
8 us, we're trying to structure a community here, you know?
9 Unfortunately, this is a community that isn't just going
10 work from the top down. This is not an administrative
11 thing. There have been a lot of comments that have cited
12 cost and inefficiency. And I can say that any time you do
13 sweeping changes to construction codes, you're going to
14 have cost factors simply, because people are used to doing
15 things a certain way and now they are going to have to do
16 them differently. And there are several things about the
17 Standards that changed that.

18 With that being said, so how many people have
19 electronic devices on them here? It looks like pretty much
20 everybody, right? How many people have got a Facebook
21 account? Nobody's got a Facebook -- okay, one person. All
22 right, so with that being said it's interesting to me that
23 most of the questions that are being addressed in here are
24 really ones of networking amongst people that have common
25 concerns. And we really don't have that outlet.

1 I noticed at the very beginning, we pointed out a
2 couple of different websites that were available. I, in
3 teaching my course, have never actually seen that material
4 provided to me. I'm guessing that part of the reason is
5 that when we talk about electronic means of software,
6 primarily we're talking about compliance, right? We're
7 talking about planning phase. We're not talking about the
8 implementation phase. And to the best of my knowledge, the
9 implementation phase is where a lot of the cost is being
10 incurred, because people really aren't sure what it is that
11 they're doing.

12 The number one question that I get from students
13 who have passed my course who go out to do their first
14 acceptance test is, "What do I do first?" That's the
15 number one question. And I think that that question is
16 generated primarily because you give them the training
17 about how far a lighting zone is supposed to come into an
18 area based on the height of a window, but you don't really
19 teach them how to fill out the forms and what they're
20 supposed to look for. And all of that is predicated on the
21 expectation that a construction worker is suddenly going to
22 become an inspector and they're really two completely
23 separate skill sets.

24 So with that being said, I think what really
25 needs to happen here is there has to be a re-tooling of how

1 everybody is communicated with and what the forms are of
2 for people to get together. Because while all of this is
3 wonderful -- and I'm guessing quite a few of you have
4 traveled a long distance to get here -- electronic means
5 would mean a much better way to have this out.

6 Obviously, I represent people that are on the
7 installation side. So for us, it's more hours and we're
8 creating additional work, which might sound a little
9 selfish on my side of things. But on the other hand, when
10 we talk about the Standards in general, having looked at
11 this in depth, these are good standards. Yes, in some
12 cases, there are some stuff that if you went fine line
13 they're a little bit excessive, but ultimately these are
14 just slight modifications to the Standards that already
15 existed.

16 Are we putting in more occupancy sensors? Yeah,
17 sure. Is demand response kind of invasive? Yeah, totally.
18 But if during the construction process people know to
19 expect these things, then you can plan your job around it.
20 I mean, the number one issue, I think, that most
21 contractors are having is that they have no idea how to bid
22 this into a project. So as with anybody who is unsure of
23 that kind of thing, they're going throw a large number at
24 it and hope that it comes out in the wash. And that's why
25 I think some of these inflated numbers are being generated.

1 Also, you have to remember this is not even a
2 year-and-a-half's worth of implementation. The very people
3 that are going to see this were on the compliance side of
4 things. And most of the issues that they were dealing with
5 have -- I don't know if they've been resolved or not -- but
6 they've got a lot of software to help them find the right
7 answers. People in the field don't have access to that
8 stuff. I don't think there's a single acceptance
9 technician, at least for the Part 6 quotient, that's
10 carrying around binders or has access to the actual
11 Standards that they're supposed to be reading out of.
12 They're using cliff notes that are based on whatever they
13 learned in whatever class they took, wherever they took it.
14 So having a community reference really would be my number
15 concern.

16 And then the second thing is specifically for the
17 CEC. When we get CEC certified devices, let's put
18 something the devices like a barcode or QR code that makes
19 it easier to figure out that is, because as it stands right
20 now having to look up everything in that website is very
21 time-consuming. And it's just a silly waste of technology.
22 We live in Silicon Valley, so with that being said, thank
23 you very much.

24 MS. MACDONALD: Thank you.

25 And again, everyone on the phone and in the

1 audience, I encourage you to docket the comments that
2 you're making as well, the written comments. Go ahead.

3 MR. JOUANEH: Hi. I'm Michael Jouaneh, with
4 Lutron Electronics. Thanks for letting me speak. I know
5 it's before lunch. And I'm hungry too, so you might hear
6 my stomach growling here. But I really want to talk about
7 the lighting alterations issues that have been discussed a
8 lot today.

9 We don't want to see the CEC backslide to pre-
10 2005. So in the 2005 Standard, when you replace 50 percent
11 or more of the luminaires in a space you had to comply with
12 all the control requirements: area control, daylight
13 control, automatic daylight control, shut-off controls,
14 multi-level lighting. So that was back in 2005. Back when
15 the cost of controls, ten years ago, was ten times higher
16 than it is today. And when there were mostly only wired
17 control options.

18 So Acuity presented that they have wireless
19 control solutions for retrofits. So does Lutron and so
20 does every other major lighting control manufacturer. So
21 now the controls are ten times less costly and there's
22 wireless solutions for retrofits. Plus, if the CEC does
23 back-slide to what they're proposing for 2016, that puts
24 Title 24 well behind ASHRAE 90.1 and IECC.

25 Secondly, we want to see the analysis. Please

1 CEC, share the analysis with stakeholders, the analysis for
2 removing the control requirements from the 2016 Standard.
3 Industry, in particular, needs to see it so not only to
4 make sure that it's accurate and valid, so that industry
5 can take corrective actions on any valid issues.

6 Thirdly, controls save significant energy cost
7 effectively. We, Lutron, have submitted to the docket for
8 the 2016 requirements. Our analysis that basically shows
9 that for occupancy sensors to not be used, you have to beat
10 your lighting power density in the current standard, by at
11 least 60 percent before occupancy sensors are not cost-
12 effective. For dimming, not to be cost effective you have
13 to beat the already efficient lighting power density by 25
14 percent. Okay?

15 Also, exceptions for the controls requirement
16 should be based on lighting power density and not the
17 existing lighting power. In the 2016 proposal there's an
18 exception if you beat existing lighting power by 20
19 percent, but that's not enforceable. Once the old fixtures
20 are removed the inspectors can't verify the previous
21 lighting load. However, if you based exceptions on
22 lighting power density, that is enforceable. They can
23 verify the new lighting load. And they know what the
24 allowed LPD is, per the Standard.

25 The current 2016 proposal encourages energy hogs

1 to remain energy hogs. For instance, if you have an office
2 that's lighted to 2.5 watts per square foot, right now you
3 only need to go to 2.0 watts per square foot without
4 controls and you can apply for a lighting alteration. Yet,
5 if you have already an efficient office, with efficient
6 lighting, that's at 1.0 watts per square foot, you'll have
7 a hard time complying without using controls.

8 So the opposite should happen. Basically, the
9 energy hogs should have to have the controls, not the
10 already efficient project having to put in the controls.

11 Somebody mentioned that California's not allowing
12 LED retrofits. The biggest significant technology in
13 lighting today for almost all LED fixtures are dimmable.
14 There's no additional cost for dimming LEDs.

15 MR. SHIRAKH: I don't understand that comment.
16 Why are we not allowing LEDs?

17 MR. JOUANEH: Oh, I heard a previous commenter
18 that said "California's holding up LED technology
19 because...."

20 MR. STRAIT: Well, I think the intent of that
21 caller was to say because these projects aren't happening
22 because of control costs change-outs to LEDs that would
23 normally be taking place aren't taking place. I think that
24 was my understanding of that comment.

25 MR. JOUANEH: All right, so lastly I really would

1 like to the CEC to hold a lighting alterations roundtable.
2 I like being able to talk about this, but we really need to
3 have a discussion with all the stakeholders. I want to be
4 able to ask questions, get answers, get really specific,
5 have a dialogue so that we can correct these issues.

6 MS. MACDONALD: I have a follow-on question to
7 that. It actually goes to that subject of a roundtable and
8 the comment made. I'm sorry. I'm looking at you and I
9 can't -- could you stand up, Mathew?

10 MR. HARGROVE: Mathew.

11 MS. MACDONALD: Mathew, so conceptually a
12 roundtable, would that be an opportunity for -- you
13 indicated Mathew -- that building owners and tenants were
14 just not in the loop. Would that be something?

15 MR. HARGROVE: I don't want to imply that there's
16 not opportunities. There's tons of opportunities. The
17 dynamics of the politics that happen around here though is,
18 as the Standards are being written, this room is mainly
19 filled with advocates and environmental groups. As we're
20 now implementing them and coming back with issues, it's
21 mainly practitioners and companies.

22 And we need to somehow figure out how to get
23 ahead of the implementation issues with having more of the
24 implementing type companies upfront somehow. I don't know
25 how we'd make that happen. Believe me, it's very

1 difficult. When I hand a 900-page Title 24 document to my
2 companies, even my companies, who some of them are the
3 largest companies in the world managing real estate, they
4 say, "Sure, I'll get back to you." And it's overwhelming.

5 And just even this year, with starting the new
6 process right now, we've had to go out and hire a
7 consulting firm on behalf of our companies to help us just
8 wade through the new proposal that we're working through.
9 It's just very, very difficult, the nature by which the
10 process is happening. And we know that there's a process.
11 We know that we should be more involved. There are tons of
12 opportunities. These guys are all available to us, but
13 it's the nature of the "freight train" of which these codes
14 have moved over the past decade.

15 It went from, my understanding, a three-year
16 cycle, about a year writing the codes, adopting them and
17 then about a year kind of out there educating and training
18 and making sure folks knew what was going on. And the
19 codes that were a 3-to-5 percent jumps. So they were
20 fairly reasonable jumps. Industry grumbled, but we were
21 able to kind of move through.

22 And it seems like since I've been here the past
23 almost ten years, these jumps are massive. I mean, my
24 first on was a 12-percent jump. And then it was like a 14-
25 percent jump. And then it was a 28-percent jump. So it

1 seems like there's huge jumps and the expectations that all
2 these folks are expected to do. And on the ground it's
3 difficult, because there's real lack of education and
4 training. And somebody who was here earlier alluded to
5 that, that its very, very complicated. So it just seems
6 like we need to -- again my industry would say, "Slow down
7 for a second, let us catch up."

8 MS. MACDONALD: Thank you. I'm sorry, I didn't
9 mean to hijack your thread. But when you were talking
10 about roundtables then you got me thinking about
11 stakeholders.

12 MR. JOUANEH: Yes. And so a discussion where we
13 can see all the analysis and ask questions and get answers.
14 Ultimately we want it to be a win-win-win for everybody.
15 We want the State to get energy savings. We want the
16 lighting retrofitters and projects to go through. We want
17 tenants and owners to get new lighting. We want it to be a
18 win-win-win. And we think if we can have a roundtable
19 discussion, we can address and fix these issues.

20 MS. MACDONALD: Thank you.

21 MR. THOMAS: Hi. I'd like to follow up -- this
22 is Gene Thomas with Ecology Action -- on some of these
23 recent comments.

24 First, the word backsliding. I've got a problem
25 with that. The gentleman just mentioned that the 2005 and

1 2008 code provisions about 50 percent or more of the
2 fixtures are altered, then code is triggered. There was a
3 major disconnect between standard practice and what was in
4 the code.

5 First off, in those 2005 and 2008 codes, lamp
6 ballast change-outs were not considered alterations. Now,
7 they are. That's a huge difference. And in the world of
8 the 2008 code, virtually for lighting alterations and
9 modifications that we're talking about, where you're not
10 pulling new wire at all, nobody was pulling permits on
11 those. The building departments did not expect them.
12 They'd walk through a job, "Oh, you're getting a lighting
13 retrofit? Never mind." They were not concerned with that.
14 So we're not talking about backsliding to the 2005 and 2008
15 codes. Our problem is with the 2013 codes. And it's not a
16 matter of backsliding. It's a matter of correcting a major
17 overreach in the code. That's what the problem is.

18 And the problem isn't just that the code is
19 complex although it certainly is. But the requirements for
20 controls and dimming and daylighting and everything else,
21 we've provided very explicit costing information to the
22 Commission of several jobs that we spec'd to comply with
23 the 2013 Code. Just dimming jobs, they didn't involve
24 daylighting, this was just dimming and occupancy sensors.
25 And we gave them the costing on that. Under the previous

1 code, we gave them the costing on the same job, with
2 dimming coming in at 85 percent or less.

3 And irrespective of the additional time it took
4 to spec those, by having to do square footage measurements
5 and calculations that were not previously required, that
6 doubled or tripled the amount of time of the audit.

7 Irrespective of those costs, it more than doubled the cost
8 for that same job, just to add dimming and it's not
9 deniable. It's not worth, where we don't know what we're
10 doing, and so we're throwing costs up there willy-nilly.

11 We know what we're doing. We're very good, under
12 our program model, our energy efficiency specialists go out
13 and find the jobs. We spec the jobs. We specify the
14 equipment. We have an equipment list that's got fixed
15 pricing. And we're very good at hammering the price down
16 on dimming ballasts and controls and everything else from
17 the get go. And with all of that, it more than doubled the
18 job cost.

19 That is what is causing these jobs to not go
20 through. You've heard numerous testimony to that effect.
21 And I guess we'll have to get with everybody that we've
22 been talking to that has provided testimony under the other
23 docket, on the 2016 Code to provide the same testimony in
24 this docket to say "The industry is dying." So the people
25 that wrote the 2013 Code, by and large, are not people

1 whose livelihood depends on going out and finding and
2 selling energy-efficient lighting projects. Those people
3 are the ones that are dying right now.

4 So let's just be clear and please let's stop talk
5 about backsliding. Let's talk about correcting the
6 overreach. Thank you.

7 MR. SHIRAKH: Thank you, Gene. May I ask a
8 question from you? So since the Code has gone into effect
9 in 2013, in the newer products that have emerged, are you
10 familiar with those products? Are you familiar --

11 MR. THOMAS: We're familiar with Acuity. They're
12 a wonderful company. We're very familiar. We try to spec
13 equipment that does not cause us to have call-backs and
14 warranty issues, so we have a very high standard on
15 equipment that we spec. First we find it in our supply
16 chain process. Then we try to get the best price we
17 possibly can. And then we tell our participating
18 contractors, "Install this."

19 So there is no magic bullet. There is no product
20 that you can put this widget in and you can satisfy the
21 dimming and controls requirement of the 0213 code. It's an
22 expensive process. And we just have to be clear on that.
23 It at least doubles the cost from the equipment standpoint.

24 What would happen to you, if in your typical
25 workload, you had three main tasks that you had to do in

1 your workload. And two of those tasks now take three to
2 four times as long as they did yesterday? How's that going
3 impact the amount of work that you can do? That's what's
4 happening when you tell -- You know, I hear comments,
5 "Well, all you have to do is just go ahead and do LPA
6 calculations. All you have to do is measure the square
7 footage." You cannot go out and get plans that have the
8 square footage or the reflected ceiling plan in 99 out of
9 100 retrofit jobs. So back in 1999, I trained home
10 inspectors how to do square footage measurements, so that
11 they could do energy audits as part of their home
12 inspection process.

13 It's involved. It's time consuming. And it's
14 inexact. It's very easy to be off by 10 or 15 percent,
15 which throws your LPA calculations off. So we're good at
16 that. We trained our people how to do that, but the jobs
17 are not selling. So, our average might have been 40,000
18 kWh for a job and if we did do dimming and we did do
19 controls that might add another 2, 3,000 kWh or 4,000 at
20 the most. But what's happening is you're not only not
21 getting the savings from that 2,000 or 3,000 kWh of
22 controls, you're not getting 40,000 kWh for the entire
23 retrofit.

24 So that's the world that lighting retrofitters
25 are living in right now. And many of them are not going to

1 make it to July 1st of 2017, even if everything that we've
2 talked about in the new code sticks in there. So how can
3 we survive until then? That's the issue that's of greatest
4 concern to us.

5 MR. SHIRAKH: So is it or is it not part of your
6 business model to keep track of emerging products? I guess
7 the reason I'm asking this question I want to understand
8 whether it's a lack of communication between the
9 manufacturers and the practitioners about these products or
10 is it something else that's basically causing it to be a
11 problem?

12 MR. THOMAS: No, I mean we monitor that stuff all
13 the time. We work with Energy Division at PUC, through our
14 modified lighting calculator, to bring new equipment into
15 the list of equipment that ends up in DEER. (phonetic) So
16 we're very familiar with that. We have vendors calling on
17 us all the time, almost every day of the week. "Hey, look
18 at this new piece of equipment that I've got." And
19 there's a vetting process that it has to go through. It
20 has to get certified through several different avenues
21 before it's acceptable to the utilities to give a rebate
22 on. So we're on that stuff like "white on rice". And
23 there's no cheap, easy solution to controls in the built
24 environment.

25 Again, we're not talking about new construction.

1 We're not talking about gut-rehabs where you rip out the
2 ceiling and the walls. We're talking about retrofits when
3 you're unplugging an HID you're putting in a HIVAY. Or you
4 gutting a troffer or an exterior fixture and putting in an
5 LED kit or something else. Those are the jobs, like the
6 person from Stanford said, those are the jobs that are
7 getting held up, because these other costs that are piled
8 on are causing the decision makers to say, "Nah, my lights
9 turn on. I'm good. See you later."

10 So I think a roundtable idea is a great idea.
11 And I think it would be wonderful if we could get tenants
12 and building owners into the process. I think that's
13 really difficult, because they don't get paid for it. I
14 mean, it's easier for someone like me, that has a salary,
15 to eek some time out to take part in these things. But
16 folks that are out there trying to find jobs, trying to
17 spec jobs, and install it and show saving and maybe enable
18 a rebate and sell a job, have a very difficult time
19 participating in these things, because they don't get paid
20 for it. So I think when we inform them of it, they tend to
21 want to participate just out of self-preservation. And
22 that's why you're getting the kind of comments that you're
23 getting.

24 MR. SHIRAKH: Thank you.

25 MR. THOMAS: Thank you.

1 MR. SHIRAKH: There's Nehemiah and then --

2 MR. STONE: Mazi, mine's on a whole different
3 subject. Do you want to stick on that topic?

4 MR. SHIRAKH: Okay. Do you want me to segue to
5 Mr. Jouaneh?

6 MR. STONE: Yeah, that's fine.

7 MR. JOUANEH: The data that you mentioned? Can
8 we see that?

9 MR. STRAIT: Sure.

10 MR. JOUANEH: We'd love to have it shared with
11 all the stakeholders, so it's not (indiscernible)

12 MR. STRAIT: Yeah. So he asked how are you going
13 to do it. So who's going to get that to them?

14 MR. SHIRAKH: Well, there are extension cards.
15 All the information that is provided to us is in that
16 docket and we can forward it to you, or we can give it to
17 you directly by email.

18 MR. STRAIT: Was this submitted with some of the
19 comments we have posted online or was it submitted separate
20 from the comments we've already published?

21 MR. SHIRAKH: They submitted comments or the 2016
22 Standards on some of the cost information that he was
23 talking about.

24 Is there, Gene, any additional information
25 besides what you submitted to the 2016 docket on costs?

1 MR. THOMAS: I can get you additional costing
2 information on various types of projects, depending on what
3 you want to look at. So I just sent in, in the last
4 iteration in the communication I had with Mike Mutnansky,
5 (phonetic) sent him those projects, because those were
6 representative of the typical kind of retrofit projects
7 that we've both been doing and been trying to get through
8 under the new code.

9 And again, that percentage went from about 53
10 percent before July 1 of last year, down to less than 2
11 percent. So that calls into question the whole assumptions
12 of the code savings that's going to come from lighting
13 retrofits. If what we're telling you and all of these
14 other implementers are telling you, unless we're just lying
15 to you in the face, those savings are not going to
16 materialize. It'll materialize for new construction and
17 gut rehabs and major tenant improvements. It will not
18 materialize for retrofits.

19 And we've talked to lighting suppliers and
20 distributors and they've said, "The only up-tick we've seen
21 is been in our new construction business. Our retrofit
22 business has been totally flat."

23 You see Sylvania Lighting Services leaving the
24 State entirely. I mean, it's a body lying on the ground in
25 front of you, spurting blood. When you see that happening,

1 you don't say, "Why don't we commission a study to see if
2 there's really a problem?" You try to do what you can to
3 stanch the flow of blood.

4 MR. SHIRAKH: So if you have any additional
5 information you can give us we can share with the others.
6 That would be nice. Thank you.

7 MR. THOMAS: Absolutely.

8 MR. STRAIT: All right, just because I've
9 committed to it, it's past 12:30, do we want to power
10 through until 1:00 o'clock and then revisit the question of
11 lunch?

12 (Colloquy between audience and staff.)

13 MR. SHIRAKH: Let's get a few more comments on
14 lighting alternations. And then when that winds down we
15 can break for lunch and come back for other topics.

16 MR. STRAIT: Okay. Just to remind people, this
17 meeting is about the 2013 implementation. I know there is
18 some overlap in this area, because there was a request to
19 try to do something with the 2016 language in 2013. But
20 try to make sure your comments are germane to the 2013
21 discussion. Thank you.

22 MR MCHUGH: Thank you very much. This is Jon
23 McHugh with McHugh Energy. And the first thing I wanted to
24 talk about was I've been doing some interviews recently and
25 I'd really love to get some of your costs, Gene. Gene has

1 worked with us. By the way, the discussion about the 2013
2 Standards, Gene was a very active participant when we were
3 looking at the retrofit language. So even though there
4 probably could have been broader participation, some of the
5 folks that are on the phone and in this room, are people
6 that were participating in the 2013 Standards.

7 The thing that I've noticed is that at least when
8 we're talking about the lighting retrofit issue is
9 something that is an interaction of the Federal Standards,
10 the Title 24 Standards, and the CPUC rule-sets for
11 incentives. So as my colleague, Yanda Zhang had brought up
12 earlier, the Federal Efficiency regulations for lamps
13 essentially outlawed T-12 lamps.

14 So the baseline from which the California Public
15 Utility Commission was basing savings on was reset to T-
16 8's. So there are some larger issues besides Title 24 that
17 impact the health of the retrofit industry. So there's
18 less money available and people like Gene and folks like
19 American Lighting, a big part of their company is driven by
20 the incentives that are provided by the California Public
21 Utilities Commission.

22 In addition, there's the issue about what is the
23 baseline for the savings and therefore the incentives that
24 are provided? And at this point and time, the focus has
25 been on allowing to claim a particular baseline for

1 lighting, but then for controls, the controls are zeroed
2 out. You're doing the lighting, so you've got to do the
3 controls anyway. And really, the issue is not so much the
4 code, but that there's actually no incentive for the
5 controls. So I assume that if CPUC was offering money for
6 controls, all of a sudden things are wonderful and hunky
7 dory. But the issue is they're not providing incentives
8 for controls. And so, you know, in some cases, what the
9 consumer is seeing is, "Hey, the utilities are paying for
10 all but \$10 of this light fixture change-out and now I've
11 got a control that might cost \$50 on top of that \$10."

12 So there is some sticker shock about that, but to
13 some extent that is part of the market distortion that
14 comes with incentives. And really, this is more about what
15 would have happened without the incentive program at all?
16 Would there have been the lighting retrofit and would there
17 have actually been the savings from controls?

18 Now I've talked with one lighting retrofitter and
19 they gave me some costs for controls and I've shared that
20 with Mazi. And what we found was that when they had to do
21 the controls, the paybacks, depending on what it was, if it
22 was a warehouse system, the controls actually had paybacks
23 that were less than two years. For office spaces, the
24 controls paybacks were less than five years. But the
25 question is some people don't necessarily want to pay for

1 that.

2 And the other side of it is that what I was told
3 was, "No, we're not calculating the savings. We're not
4 even trying to sell it to them." "We're selling a lighting
5 retrofit that's based on a change of technology and when we
6 come to the controls, we're not even calculating the kWh
7 savings from the controls. We're just saying hey, this is
8 something the government is making you do and this is the
9 cost of it."

10 So, in terms of training, there's potentially an
11 opportunity for training in terms of, "Hey, these controls
12 are actually a good financial benefit." Ideally, there
13 would be some incentives for controls that wouldn't have
14 been in there otherwise. And also there's not necessarily
15 a deemed -- I don't know if you agree with this -- but a
16 deemed calculation for the savings from certain controls.
17 So that's another problem. So this guy's selling me a
18 lighting system. Why should I believe him, if he's selling
19 me controls?

20 So there's a number of gaps and those gaps aren't
21 necessarily involved with the Energy Code. They're gaps in
22 terms of how the efficiency programs are currently
23 designed. And to some extent, the potential is the blow-
24 back from how these programs are designed is that we're
25 essentially looking at a reduction of the stringency of the

1 standards that potentially could wipe out all of the
2 savings from the 2016 Efficiency Standards. So all the
3 other work, all the stuff that we've been doing on zero net
4 energy buildings, all the work that we've been doing on
5 water heating and all those other things, comparable loss
6 in savings that's equivalent to all the efforts to do the
7 rest of the 2016 Standards.

8 And so this really shouldn't be taken lightly.
9 Now, I understand that there's a concern about "What is a
10 rollback and what isn't a rollback?" I think there's
11 really two primary issues. One has to do with what is
12 being used for baselines of efficiency programs and do we
13 actually look at what is truly the difference between what
14 would have happened without the program with what would
15 have. And that there are significant savings from controls
16 if controls stay intact.

17 The second thing is I think everybody's heard
18 about this in terms of complexity. Can we streamline? Can
19 we make things simpler? Do the forms have to be so long?
20 Is there a need for the installation certificate? You
21 know, a whole new realm of certificates were added in the
22 2013 Standards in addition. So I think it's really
23 important to unweave those different questions, because I
24 think the outcome would be particularly different rather
25 than just saying, "Let's take out the sword and cut the

1 Gordian Knot be eliminating a fairly significant amount of
2 energy savings for the State, because there's all these
3 other problems.

4 And frankly the other problems, in terms of
5 complexity of the Standards, the levels of paperwork
6 requirement, and some of the costs that are associated with
7 implementation -- those still aren't solved by just sort of
8 rolling back to frankly before the 2013 Standards. Thank
9 you.

10 MR. PENNINGTON: Could I ask you a question,
11 Jon? And I'm sorry I'm not the mic.

12 MR. SHIRAKH: You need to get it.

13 MR. PENNINGTON: Get on the mic, okay. So my
14 question is , is the reason that the controls are not
15 recognized essentially a code baseline question also or is
16 it a different question?

17 MR MCHUGH: It's my understanding is that it's a
18 code baseline.

19 MS. MACDONALD: Thank you.

20 We have another commenter behind you.

21 MR. SMITH: My name is Christopher Smith and I
22 represent a couple hundred electrical contractors and
23 developers around the State of California. And since I'm a
24 part of a relatively large organization, we have plenty of
25 staff members in business development and compliance and

1 engineering with connections sort of across the industry.
2 So we had the capacity to see that the 2013 changes could
3 have a huge effect on the way our members do business.
4 So we looked ahead and we built an entire business,
5 curriculum. We tried to get our members, the ones that are
6 interested at least, as educated as they could possibly be
7 in this, so that they weren't completely blindsided and hit
8 hard by something that they weren't ready for.

9 The communication has clearly been an issue for
10 industries and for companies, for other organizations that
11 didn't have the capacity to do so like many of the small
12 businesses that we heard from today. I'm not here to brag
13 about that. I'm here to share some solutions with you that
14 have worked for some of our members who are smaller or some
15 of the companies who were hit hard by this.

16 Performance-based financing was a huge one that
17 they were able to use that set of costs big time. So that
18 instead of being hit by an astronomical price that was had
19 to be paid out of pocket first, they moved it to the side
20 and paid it off as these actual lighting controls and new
21 lighting fixtures actually started to work.

22 Second, they used PACE financing, which is a very
23 underutilized program that's here in California. And it
24 works in a similar fashion. And it's been also very
25 successful in making these things go forward.

1 Third, we partnered with a lot of engineering
2 firms that are either very handy at doing this or lighting
3 control manufacturers that saw this as well. We heard from
4 Lutron and other ones along those lines, who knew how to
5 make this work.

6 So there are solutions out there, but I totally
7 understand where you're coming from. I think the biggest
8 problem that we had with these 2013 Standards was
9 communication and the implementation. Because what we're
10 doing, this is a very lengthy -- and I don't want to use
11 the word aggressive -- but it's very optimistic code
12 changes. Do I think they're going to make California a
13 better place? Certainly. But when you're jumping this
14 much more further in code you're going to have some -- it's
15 going to be complex. And you're going to have to find a
16 way to get it out to the people. And I think that's where
17 the major break down was.

18 My side job that I moonlight doing, I work with a
19 business constituent of mine and we've developed something
20 that we think will help everyone in this room. We
21 developed an app that will help you not only determine when
22 and where these codes are going to be traded, but it will
23 also help you design a system which streamlines your
24 compliance, which streamlines your acceptance testing. And
25 it's an all around great application, which can help anyone

1 who's struggling with it get the education they need. They
2 have access to a help blog. The forms can be submitted
3 electronically. And it's quite easy. And I urge you to
4 look into it. And we'll leave the flyers here if you're
5 interested. That's all I have to say. Thank you.

6 MR. STRAIT: Can you can bring them up to this
7 table here?

8 MR. SMITH: Sure.

9 UNIDENTIFIED SPEAKER: Chris, could you restate
10 your last name and the organization you're with?

11 MR. SMITH: Christopher Smith. I'm with Pro
12 Procedure, but the first job with the large organization is
13 with the Statewide Labor Management Cooperation Committee,
14 or the Statewide LMCC.

15 MR. NESBITT: George Nesbitt. I'm not nearly as
16 much of an expert on the nonres code as I am on the
17 residential sections. But lighting has mandatory and
18 prescriptive, but in new construction you can use the
19 performance path and you can trade off the prescriptive
20 requirements by meeting the equivalent. But in
21 alterations, you can't do a performance path. So I don't
22 know if having one would be helpful, although certainly
23 some people would argue having to collect more data might
24 be hard.

25 The other thing is what we're after is savings.

1 So if we're reducing wattage of fixtures that are installed
2 or if we're installing controls we should be getting
3 savings. And that's what we're after. So I don't know the
4 trigger points, but certainly for the gut-rehabs or moving
5 things around where you're doing a lot of major
6 alterations, call it an addition even though you're not
7 adding space, as opposed to changing fixtures or bulbs or
8 ballasts or controls or adding those, perhaps. That those
9 trigger points or the requirements can't necessarily be the
10 same as new construction. And sort of the global comment
11 is, "We're getting to the point where our requirements for
12 new construction don't really fit in alterations a lot."
13 We need to have essentially new construction rules versus
14 alterations. More of those requirements have to diverge.

15 MR. THOMAS: If I could follow up just briefly, a
16 couple items. On the financing for energy efficiency
17 improvements, we've done some of that and it can be good.
18 But it's by no means a panacea. One of the contractors
19 we've worked with quite a bit that had quite a few projects
20 in the pipeline, under financing like that, went bankrupt,
21 because they were carrying \$2.5 million worth of financing
22 receivables. And what was supposed to be a 30-to-60 day
23 window for them to get paid, was 6-to-9 months. They
24 couldn't hack it and that killed the business.

25 So it's not working very well now. Although it's

1 a good idea, but it's not something where you can just
2 cavalierly say, "Oh yeah, don't worry, these costs can all
3 be financed on your utility bill." That's not necessarily
4 an answer.

5 A couple of other quick follow-ups to Jon's
6 comments. One of them -- and this was alluded to before
7 about Federal Standards in T-12's -- we just walked into a
8 business the other day and looking at their back stock they
9 had a whole freshly delivered pallet of 40 watt, four-foot,
10 T-12 lamps, that comply with the Federal Standards. You
11 can get virtually any length of T-12 lamp right now that is
12 either exempt or complies with the standards.

13 And we've provided testimony to the PUC about
14 this. So we finally got PG&E to allow rebates from T-12 to
15 whatever we're putting in and credit that energy savings,
16 because they're not extinct. They're alive and well. So
17 the upgrade path for a business owner if he's got T-12s and
18 it burns out is to go and get another T-12. But guess
19 what? 34 watt T-12's are gone. 40 watt T-12's are there.
20 So if you had a 34 watt before, he's actually putting in a
21 40 watt now. And this is happening all across California.

22 And that factors in to the supposed shrinkage of
23 the lighting market. That's an artificial construct. Once
24 again, it's where the concept of these changes is developed
25 in a room or developed with computer models rather than

1 being out actually in the businesses talking to the people
2 who do the work. So I think that's it. Thanks.

3 MR. STRAIT: Do we have any additional comments
4 from those who are (indiscernible) We have --

5 MS. MACDONALD: One on the phone.

6 MR. STRAIT: All right. Let's get that person
7 and then we can address lunch as well, okay?

8 MS. MACDONALD: Well, we're going to move for a
9 1:00 to 1:30 lunch.

10 MR. STRAIT: Okay, Neil?

11 MS. MACDONALD: Neil, go ahead.

12 MR. SHIRAKH: He is out to lunch.

13 MR. MILLER: I have no comment, I'm sorry.

14 MS. MACDONALD: Oh, okay.

15 So then I'm going to move that we break for lunch
16 right now and reconvene at 1:30.

17 MR. STRAIT: I think Paul Bony had his hand up
18 over there?

19 MS. MACDONALD: Paul?

20 MR. STRAIT: Paul, do you have any other comments
21 or is your hand still up from the previous comments that
22 you made?

23 MR. BONY: I can't think of any others.

24 MS. MACDONALD: Okay. Thank you.

25 MS. MACDONALD: Okay, we're going to break for

1 lunch now. Thank you.

2 MR. STRAIT: We will return at 1:30

3 (Off the record at 12:37 p.m.)

4 (On the record at 1:39 p.m.)

5 MS. MACDONALD: Okay, we are reconvening. Thank
6 you for your patience on the phone and first up we have
7 Nehemiah Stone.

8 MR. STONE: Thanks. Nehemiah Stone, Benningfield
9 Group. One quick comment first and that is on the issue of
10 Insulation Certificates. Over the last year our firm has
11 visited a number of building departments and there are no
12 cases where I saw that the Installation Certificates --
13 when we started doing it, it was the CXCR, but in no cases
14 did we see that there was a crease at the staple line on
15 the stack of forms. Building departments don't really look
16 at them. And I'm not saying that there's -- what I'm
17 saying is that there is a problem, and on this particular
18 one I don't have a solution, but I will reinforce the idea
19 that it's kind of a waste of time to have them fill that
20 out.

21 The ones that I looked at, the installation
22 certificates and the verification certificates had very
23 different information on it. You know, what people said
24 they were installing was just kind of going down and
25 checking off stuff, or something like that, because they

1 did not pay attention to it and the building departments
2 don't pay attention to it.

3 Anyway, that said, when I worked in this
4 building, the last four years I was here I worked for
5 somebody who -

6 MS. MACDONALD: I want to see if your mic is on.

7 MR. STONE: The green light is on.

8 MS. MACDONALD: Oh, okay, it is.

9 MR. STONE: Do I need to speak into it closer?

10 MS. MACDONALD: That's better, there you go.

11 MR. STONE: All right, so I was instructed don't
12 bring me another problem unless you have a solution, so I'm
13 bringing you a problem and a solution, and I want to let
14 you know the utilities have already committed to helping on
15 this.

16 The problem is that the current approach to the
17 case work doesn't pay enough attention to potential
18 compliance problems and that's why a lot of the stuff comes
19 up, is that initially the case reports didn't say anything
20 about compliance, and then they moved to where they said,
21 "Is there a compliance problem?" And you could simply
22 answer no and move on. And that's not really sufficient.
23 So what I'm suggesting is that we redesign the case
24 template so that compliance is addressed by case authors in
25 a more structured way.

1 And here's the structured way that I'm
2 recommending. At the outset of the issue when they pretty
3 much are dealing with just an outline, they should identify
4 specific stakeholders with installation and compliance
5 experience who can, and then will, review the draft and the
6 final proposals.

7 The second step, solicit stakeholders' review and
8 feedback on the initial proposal before it's fully fleshed
9 out, before you have all the language written and you've
10 done all the economic analysis, you know, you kind of know
11 what you're going to be proposing, get their feedback on
12 that kind of a proposal.

13 And third, report the stakeholders' concerns and
14 how the authors addressed those concerns, report that in
15 the case study.

16 The next step is solicit stakeholder review and
17 feedback on the draft final case reporting, including the
18 Standards language, the ACM implementation proposed, and
19 the proposed Manual language and tables. I am not
20 recommending that that same group of stakeholders go
21 through and say, okay, your economic analysis is right or
22 wrong, etc., but on how the Code proposal is actually going
23 to work when it hits the streets.

24 And lastly, report stakeholders' feedback and the
25 case author's response to each issue, and what I initially

1 said on how the issues were addressed, and now at the end
2 here I'm saying the response, a lot of times stakeholders
3 will throw up issues that you can't really address, it's
4 just an issue and the response may be, "Yeah, we thought
5 about that and that's not that relevant." But everyone
6 should be responded to in the Case Report. That way it
7 simply isn't a matter of the folks who are really good on
8 the engineering that are doing the case study kind of
9 thinking through what they think the compliance issues and
10 the implementation issues will be, but you're getting input
11 from those where the rubber hits the road. Thanks.

12 And by the way, PG&E asked me to let you know
13 they are willing and committed to that process of rewriting
14 the case template to include that compliance issue. To
15 whom do you want me to give the mic?

16 MS. MACDONALD: George.

17 MR. STONE: Do I have to? This will self-
18 destruct in three minutes, George.

19 MR. NESBITT: Look who's talking. Who put a
20 leash on him today? No. George Nesbitt. Implementation,
21 I had Energy Commission staff thank me because I often talk
22 about implementation and issues and how things work in the
23 real world, and staff has said, honestly, the Commission
24 doesn't think enough about implementation. Not always
25 easy. And I think one of the problems is, especially with

1 the 2016 Code cycle, things got delayed, they got rushed, I
2 don't think we had as much time, things get pushed through
3 and you don't always have time and, as Matt Christie said,
4 there's not a lot of time. And we do raise a lot of
5 issues.

6 In the 2013 Code, one of the last minute things
7 to come up was the Alterations Section, the HERS Verified,
8 where we used to have vintage tables and software would say
9 if you put in a value below what the vintage default was,
10 it would put out a little error or message just saying, you
11 know, kind of cautioning that this may or may not be true.
12 And in 2013, we went to HERS Verified of an existing
13 condition that gets altered, if you don't verify it you
14 basically get compared to a higher standard. You get
15 penalized because it was so easy with existing buildings
16 and alterations, as long as you didn't increase energy use,
17 you complied with Code. You didn't necessarily make the
18 house any better. And that's what we want, things to be
19 better.

20 So the thing is, this was very last minute and,
21 you know, you have really no time to respond and to think
22 about unintended consequences. I've never been asked to do
23 a HERS verification of existing building yet, plus you only
24 verify what's altered, not all the existing conditions, yet
25 all those existing conditions

1 Determine your budget and therefore your ability
2 to do your alterations, or your addition and alterations
3 and show compliance. So what's stopping me from taking a
4 post-1978 home? Just say 2000 home for argument? Saying
5 it had R zero wall insulation, floor insulation, attic
6 insulation, now I can do whatever I want, I don't even need
7 HERS Verification of existing conditions because I've got
8 enough budget that I can show compliance. And these are
9 the kinds of things that these are people problems, yes,
10 but at the same time software. And I haven't really fully
11 gone through CBECC to see if you put in an invalid, say if
12 I put R zero for a new construction for a wall, whether it
13 will say, "No, you can't do that." And so some of the
14 software things, I think this is a big implementation
15 problem and a compliance problem.

16 So, yeah. I mean, I brought this up in the 2016,
17 you know, the solution at a minimum is probably bringing
18 back those vintage defaults and flagging things, but even
19 there you have a problem if I can lie about the date of the
20 house when it was built, or when an addition which
21 determines the vintage.

22 MS. MACDONALD: Okay, thank you. I know the
23 Public Advisor's Office has a comment.

24 MR. PITTARD: Hi there. I'm Shawn Pittard, I'm
25 with the Public Adviser's Office here at the Energy

1 Commission. And one of the things that we do is we will
2 make a "relate a comment" is the word from our Regulations,
3 actually, relate a comment from a member of the public who
4 can't physically attend that day. So Mr. Douglas Dougherty
5 filed written comments, but he asked if he could be heard,
6 and so I'll relate his comments today. And they're on the
7 issue of the geothermal heat pumps.

8 So Mr. Dougherty is the President and CEO of the
9 Geothermal Exchange Organization and he writes that, "The
10 current title 24 Energy Code does not recognize the
11 efficiency of geothermal heat pumps and the contribution
12 they could make to California's energy goals." He's
13 concerned "that building designers and owners, that you
14 have to struggle to get GHPs into their projects, and that
15 the compliance process requires using workaround approaches
16 to get GHPs through the State's Energy Compliance
17 Software." He suggests that, along with other geothermal
18 heat pump industry stakeholders that he asks for a blanket
19 approval of GHPs in the current and future versions of
20 Title 24 Code until the CEC can develop an alternative
21 compliance method for the technology. So his letter in its
22 entirety has been docketed.

23 And so for anyone here today that is a member of
24 the public, our office is here to help if you need some
25 help with communication with the Commission, or help you

1 participate in a public meeting. So thank you.

2 MS. MACDONALD: Thank you, Shawn. And one last
3 check, is there anyone on the phone? Okay. Pat.

4 MR. SPLITT: The moment we've all been waiting
5 for.

6 MS. MACDONALD: So going into this, Pat, I want
7 to preface this with your comments are on the docket, your
8 comments are also on the 15 MISC 01 docket that was
9 previously gone through and responded to at a Business
10 Meeting, and so this is your time to provide new
11 information and to interact with staff and then I know
12 there's a lot of information that we're going to cover.
13 And so I don't know if -- and I'm asking you if there are
14 hands raised on the phone during this time if maybe you can
15 -- because I know we have a lot of information to cover,
16 but I --

17 MR. SPLITT: No, I'd rather they pop in or else
18 they'll forget what they wanted to say.

19 MS. MACDONALD: Okay. Please proceed.

20 MR. SPLITT: So that's okay, just interrupt me,
21 and just stop my clock!

22 Okay, well, I started this a while ago, actually
23 over the Christmas holiday I had time to think about the
24 Energy Code and was expecting the Commission to have
25 continued updating things as it sounded when we got to the

1 adoption date, but they were still ruling out updates, but
2 things sort of stopped and the Commission moved on to 2016.
3 So I came up with 21 items that were all what I thought
4 were errors or things that needed to be corrected in the
5 actual Code language, not in the manuals or having to do
6 with computer programs, but actually language in the Code,
7 so that's what I zeroed in on.

8 So today I'm just going to go over those. The
9 staff has already prepared a paper reviewing those and I've
10 heard that they've implemented some of the changes I made
11 and I'm sure they'll let us all know about that when we get
12 to them. But I'm just going to go through these and try to
13 do it all in an hour.

14 So my first problem had to do with Section 120.7,
15 Mandatory Insulation Requirements. And this is where it's
16 something that is relatively new, they just set up some
17 minimum requirements for different types of assemblies, no
18 matter what. And then one of the comments that the
19 Commission made was that, well, this is sort of the basis
20 for both prescriptive and performance standards, but in
21 fact those mandatory numbers can never possibly affect
22 prescriptive standards because the prescriptive
23 requirements for all those assemblies are more restrictive.

24 So these minimum numbers don't mean anything
25 because if you're doing prescriptive, you're already

1 exceeding them in every case, so it has nothing to do with
2 prescriptive, only performance.

3 And in performance, say I modeled a building, say
4 it's a non-risk building, for instance, and say the program
5 let me run it and it passed. But in fact it didn't let me
6 run because I had a piece of wall where its U-Factor wasn't
7 what was required by this minimum. So what I'd have to do
8 to get the program to run is I'd have to increase the U-
9 Factor of that wall assembly.

10 Now the program would run and it would pass by a
11 little bit more because there's less heat loss through this
12 wall. But maybe that was a concrete wall that to insulate
13 that thing for just maybe 20 square feet of wall or
14 something is really expensive. Well, it costs more money,
15 so the owner is going to say, "Well, can I save money
16 somewhere else?" And we can say, yeah, we can take
17 insulation out of some other part of the building and still
18 pass, and maybe I can take out more insulation, so now
19 actually my compliance margin still passes, but it's lower
20 than it was before I made this change. So this mandatory
21 change did not in any way cause energy to be saved, it just
22 cost more money to screw around and make this change which
23 somebody then is going to try to recover those costs by
24 taking something out somewhere else.

25 It's just a silly game that accomplishes nothing.

1 And that's the same thing for every one of these mandatory
2 minimum requirements when you can model the thing in
3 performance and just trade it off. They never affect the
4 energy use. You can always trade that increase against
5 something else and get it back down to where you were
6 before, or less, so you either didn't save energy or you
7 lose more energy, but the cost went up, so that can't
8 possibly be a cost-effective energy conservation feature.
9 So that's all I had to say about that one. So I think just
10 get rid of all these mandatory requirements, they just
11 don't accomplish anything.

12 MR. MCHUGH: So what I remember about this, I
13 think someone from actually Santa Cruz contacted me and if
14 what you're talking about is insulation in walls, this
15 fellow had I think it was a tilt-up building and, you know,
16 "Gosh, do I actually have to put insulation on this tilt-up
17 wall?" Because I had first thought, oh, yeah, you've got
18 to have this minimum -- there's actually an exception or a
19 requirement that says if you have a cavity in the wall; if
20 you don't have a cavity in the wall, you're not required to
21 put insulation in the wall. Was that the issue that you
22 were looking at?

23 MR. SPLITT: No, this is a minimum and it's for a
24 concrete wall, it's a U-Factor more than what you could get
25 with maybe like a six-inch wall, but maybe if it was 12-

1 inch, you'd make it. And that job --

2 MR. MCHUGH: I'll take a look at this again
3 because I thought there was actually something in there
4 that talks about the cavity and that you're not actually
5 required to put insulation in it.

6 MR. SPLITT: Well, there could be something in
7 another part of the Code because they conflict all the
8 time, but for the section I was looking at.

9 UNIDENTIFIED SPEAKER: So I think the Recorder is
10 probably not hearing it.

11 THE REPORTER: No, I'm getting it.

12 MR. MCHUGH: Maybe it's just my soft voice. The
13 other thing, though, just related to this is that when we
14 do the performance approach, essentially we're evaluating
15 everything on an equal energy basis and the reality is that
16 for envelope issues, when you tear open the envelope, this
17 is a lost opportunity, this is potentially an opportunity
18 that you have once every 30 years, and the issue
19 associated, they're trading that off with equipment
20 efficiency or these other things that have shorter lives,
21 and I actually think it is rational to have some mandatory
22 minimums, especially for envelope issues, for that very
23 reason.

24 MR. SPLITT: Well, okay. I don't think that it
25 should be a mandatory in all cases, but I can see instances

1 like, say, I'm doing a retrofit and I'm changing windows,
2 and I'm moving windows around. So I put a window here
3 where there wasn't one, but I took a window out, now
4 there's a hole in the wall, and maybe the rest of the wall
5 is uninsulated, so can I say, well, let's just leave it
6 uninsulated? I'm saying, well, no, it's open, we should
7 put insulation in there. But we should just put enough
8 insulation that we can without it being cost prohibitive.
9 So if this is a house, there's a 2 X 4 wall, we put in R-13
10 insulation.

11 We don't have to come up and add another inch of
12 foam on the outside and just have this little piece of wall
13 that pops out. So there are instances where I could see
14 that there should be requirements, but I just don't think
15 it should be this overall cover everything type thing.

16 MS. MACDONALD: Can you state your name for the
17 record?

18 MR. MCHUGH: Oh, my name is Jon McHugh.

19 MR. NESBITT: And George Nesbitt. A lot of the
20 mandatory measures, or even prescriptive measures, are
21 written typically like, say, residential wall is R-13 wall,
22 or an equivalent U-Value, but it's also supposed to, in
23 general, be an average -- your average. So there can be
24 areas that have a lower U-Value or a higher U-Value, as
25 long as it's the average, and this may even be a software

1 issue where its rule set is too tight, and they're saying
2 you can't do that; whereas, in theory, my understanding is
3 you should. And, I mean, I know in CBECC-RES, often it
4 gives you U-Values, but I don't know if it's looking at all
5 the walls or all the windows and doing a total -- well, on
6 the CF1R you come up with an average U-Value. So that's my
7 thought on this.

8 MR. FERRIS: Todd Ferris with Compliance Software
9 Unit. I don't think CBECC is doing that weighted average
10 calculation. It's expecting there's a form for the
11 weighted average calculation that you would basically use
12 and enter your U-Value for the entire house.

13 MR. STONE: Nehemiah Stone, Benningfield Group.
14 A point related to Jon's point, but from my perspective
15 potentially even more important, if there was no minimum
16 for walls, ceilings, etc., what you'd be giving up is
17 something that is a permanent part of the building that
18 could be traded off against a water heater, which gets
19 replaced on average every 12 years, or, you know, something
20 else that is not a permanent part of the building. So to
21 the extent that you won't allow tradeoffs, that's good, but
22 having a floor where you're not going to trade off below
23 this item, below this level, I think is required at least
24 for all those measures that are a permanent part of the
25 building.

1 MR. SHIRAKH: I think what Pat is saying is that
2 you can't apply the mandatory for a new construction to
3 alterations, I mean, you need to think about that. When
4 you develop something for new buildings, does that make
5 sense for alterations? And that's the whole thing that
6 we've been talking about all day, about lighting
7 alterations.

8 I think the same thing happens with -- I think we
9 all agree that we have to have mandatory minimums for the
10 reasons you and Jon are stating, you know, it's lost
11 opportunity, it's there forever, whereas other stuff come
12 and go. But I think he's got a point that you can't just -
13 - if your mandatory minimum was R-19 for a new
14 construction, you can't just apply that to an alteration,
15 you've got to think about that.

16 MR. STONE: I understand that, Mazi -

17 MR. SHIRAKH: I think for 2016 we actually have
18 language in here that should deal with that because
19 basically we're limited to the amount of insulation that
20 you can put into the cavity for alterations, and we should
21 probably look at that.

22 MR. STONE: I kind of have a hard time imagining
23 where this comes up other than walls, and walls there has
24 been that exception, you know, if you're remodeling. And I
25 can't speak to the nonres standards, I've never gotten that

1 deep into them, but I did help to write a couple iterations
2 of the Residential Standards. And with the Residential
3 Standards, if you're doing a renovation, you have a 2 x 4
4 wall and R-19 is what's required in your area, you don't
5 have to do it.

6 Even the R-13 that is the minimum requirement, it
7 used to be you didn't have to change that, you didn't have
8 to move that, so if you want to give an exception for those
9 cases where the structure of an existing building makes it
10 so that you can't meet the minimum, that's one thing, and I
11 think that's been done already. But there's no reason why
12 you wouldn't apply that to the floor insulation or the
13 attic insulation, there's just no reason at all, or to the
14 windows.

15 MR. SPLITT: Okay, well, most of the instances
16 where I've had these problems are commercial and they have
17 to do with spaces where maybe it's a first floor commercial
18 lease spaces with condominiums above or something, and it's
19 concrete construction. And it might have a space that's
20 going to be -- it's earmarked to be a restaurant, so
21 there's a kitchen area in back and there's a seating area
22 in front, which is almost all glass, but there's some
23 concrete columns.

24 And so I can take in the back we're going to
25 cover up that wall anyway and fir it out and they can

1 insulate that because we want some really washable heavy
2 duty surface, but the architect wants to see these columns
3 exposed, it's his design. And it's not going to make a big
4 deal either way energy-wise, but there should be at least
5 some minimum allowance for architectural details that
6 aren't going to make a big difference.

7 But the way it is now, the program won't run, it
8 just looks at that wall, U-Factors it, and says, well, I'm
9 not going to do anything, it don't matter how efficient it
10 is.

11 And so it's just those instances or, you know,
12 somebody wants to reuse these stain glass windows or
13 something. You know, you have to have some allowance for
14 special situations where we can get things to work, so
15 that's what this is all about.

16 MR. SHIRAKH: Okay, that was 15 minutes and one
17 comment.

18 MR. STRAIT: But we did go through four different
19 commenters, so divide it out, it's closer to three minutes.

20 MR. SPLITT: Okay, the next one had to do with
21 nonresidential windows and having them always modeled as
22 fixed in the Standard, and I guess that's already been
23 addressed somewhat?

24 MR. FERRIS: That's been changed, yes.

25 MR. SPLITT: Okay, so we got some time back. So

1 the next one had to do with Section 150.0(Q) and that was
2 also the same question I had. This had to do with in
3 residential maximum fenestration U-Factor, this is the same
4 deal when somebody has stain glass and they want to reuse
5 it, there should be some way of getting around that.

6 MR. PENNINGTON: So isn't there an exception for
7 some square footage of glass?

8 MR. SHIRAKH: Bill Pennington's question was is
9 there some exception for square footage of the glass.

10 Payam, can you come up to the podium?

11 MR. BOZORGCHAMI: I don't know the section number
12 right now, but I think it's 10 square feet.

13 MR. STRAIT: Would you identify yourself?

14 MR. BOZORGCHAMI: Payam with the California
15 Energy Commission. So it's -- what section is that?

16 MR. MCHUGH: It's 150.0(Q), Exception 1 has the
17 exception.

18 MR. BOZORGCHAMI: It's a weighted average. Up to
19 10 square feet of fenestration area or .5 percent of the
20 conditioned floor area, whichever is greater, is exempt
21 from the maximum U-Factor requirements. It's a weighted
22 average, so if you're going over 10 square feet, you could
23 weight average it with other fenestration products within
24 that building.

25 MR. SPLITT: Okay, the next one was Section

1 150.1(c)(3)(A), Exception 4, and that has to do with
2 fenestration and residential applications. And the
3 exception is for - this is actually the same thing where
4 you can take the U- weighted average, but there's an
5 exception that says, "For dwelling units containing unrated
6 site built fenestration only and meeting the maximum area
7 restriction, the U-Factor and SHGCs shall be determined in
8 accordance with the nonresidential tables. And it says
9 116A and 116B, and I made a correction that the numbers are
10 wrong. It should be 110.6(A) and 110.6(B) in the new
11 Standard.

12 And the question had to do with the word "all."
13 It shouldn't only be able to take this exception if all the
14 windows are that way; if some of them were, you should be
15 able to take the section for the ones that are that way,
16 and do whatever you want with the others. So that was
17 basically it. It's just the word "all" or when a site
18 built fenestration only, it should be for the site built
19 fenestration, I don't know, I'm trying to get back on
20 schedule here. I've got some later on for you guys.

21 Section 150.2(B)(ii) --

22 MR. STONE: Hold on, but you can repeat the
23 question, Mazi. Is the way Pat made that exception the way
24 that you understand it? That's not how I understand it.

25 MR. SHIRAKH: So we actually have a detailed

1 response to each and every one of these and it's in the
2 docket, and so I would look at every comment that he made
3 and we responded, we spent a lot of time, so it is in the
4 docket and I don't have all the staff who were involved in
5 developing the language here, so, you know, I would
6 basically suggest that you guys go to that document.

7 MS. MACDONALD: Yes, it is docketed under 15-
8 MISC-01, yes. And if anybody wants to email me,
9 RachelMacDonald@Energy.CA.Gov, I can help point you in the
10 right direction.

11 MR. SPLITT: I actually put my 21 items to this
12 docket, too.

13 MS. MACDONALD: Oh, it's docketed in 02 as well,
14 you're right, thank you, Eurlyne, thank you, Pat.

15 MR. SPLITT: So the staff's positions are in this
16 docket. Just helping you out.

17 Section 150.2(B)(2) --

18 MS. MACDONALD: And Pat, while you're looking for
19 that, I'll just notate to individuals listening, there are
20 21 comments and so we're actually working through them one
21 at a time. Individuals on the phone, if you have comments
22 or questions relating to these, or in the audience, as they
23 arise, let me know.

24 MR. SPLITT: Well, you know, I go through this
25 all the time and I'm having trouble finding -- oh, here it

1 is, okay. In the All Performance Approach, they actually
2 define how to do a performance approach in the Residential
3 Standards for Alterations and it states, "This Performance
4 Approach shall only be used for projects that include
5 tradeoffs between two or more altered components." And my
6 position is that you don't have to have two or more altered
7 components. I could just be changing the windows. And if
8 it passes with putting in better windows, I'm done. I
9 don't have to put in another altered component in; if it
10 passes performance, it passed.

11 MR. SHIRAKH: So I think our response was that
12 two components would be two windows. It doesn't have to be
13 a window and another building envelope, so if you're --

14 MR. SPLITT: But I'm not doing a tradeoff between
15 this window and that window, there's no tradeoff.

16 MR. STONE: Yes, there is.

17 MR. SHIRAKH: Yeah, because one of them could be
18 for some reason, you know, you have a window that's not
19 meeting the Prescriptive requirement, but the other one
20 could be better than the Prescriptive Standard and you can
21 do a tradeoff between those two.

22 MR. SPLITT: But that's really not how I get into
23 this. First we try to do Prescriptive. And I model the
24 building prescriptively, and if doesn't work --

25 MR. SHIRAKH: If both meet the Prescriptive

1 requirements, then you're in.

2 MR. SPLITT: No, but I'm saying so now I didn't,
3 so now I don't change anything to this proposed building, I
4 just model the performance, and it passed. You know, it
5 just happened that maybe the way the windows are oriented
6 in this edition, they're facing south instead of west, and
7 so it just for some reason --

8 MR. SHIRAKH: Well, this is for a situation where
9 if you're doing only windows replacement, if they all meet
10 the Prescriptive requirements, you don't have to go to
11 performance. But if for some reason one of your windows
12 doesn't meet the prescriptive requirements, then you can
13 use this approach to do tradeoffs. Let's say you're
14 changing five south facing windows and one of them for some
15 reason does not meet the prescriptive requirements, then
16 you can use the other four to make up the difference. If
17 they all meet the prescriptive requirements, you don't have
18 to go performance again, you just do prescriptive.

19 MR. SPLITT: Well, maybe an explanation because
20 it's not real obvious that if I was just changing windows I
21 could say, well, I changed two windows, so I'm trading off.

22 MR. SHIRAKH: I think we made it a little bit
23 clearer in the 2016 Standards that two or more -- there's
24 also a suggestion that we drop that altogether, that
25 language. I mean, we could consider that. But I think

1 just when you think about performance, you have to have at
2 least two components to do tradeoffs, otherwise why would
3 you go to performance?

4 MR. NESBITT: George Nesbitt. I think that this
5 is something I definitely agree with Pat on. Two
6 components, but then you say, "If I change two windows," as
7 opposed to one window. Well, what's two windows versus a
8 furnace? Or a duct system? I mean --

9 MR. SHIRAKH: So all it says, the language says
10 there has to be two altered components.

11 MR. NESBITT: Right, but -

12 MR. SHIRAKH: Altered components could be
13 anything that you're altering, it could be two windows, it
14 could be a furnace and a window. That's the whole premise
15 of the Performance Standard is that you have to have
16 something to trade, otherwise why would you be using
17 performance?

18 MR. NESBITT: Well, the reason you use
19 performance is because you're not using something that
20 meets the prescriptive. And as prescriptive requirements
21 get tighter and tighter, it doesn't always make sense.
22 But, I mean, the way Performance method has always worked
23 is you model the building, the Prescriptive requirements,
24 whether it's all new construction or alteration, whatever,
25 there's a standard assumption, there's a budget that's

1 calculated, as long as you beat that budget you comply. So
2 whether I change one component, one window, or 100 windows,
3 or a furnace, what does it matter? Although, you know, as
4 long as you're using equal to or less energy, that's been
5 compliance. Now, granted --

6 MR. SHIRAKH: Maybe, again, we could probably
7 drop that, but think about the situation where you have
8 like a wall, then you've got like a Bay window, and the Bay
9 windows tend to have very high U-Factors, right? And it
10 doesn't meet the prescriptive. But you could use the other
11 windows to tradeoff and comply. What you're saying is if
12 you have only one component, what's the use of using --

13 MR. NESBITT: Prior to 2013, there was certainly
14 no reason you couldn't have only changed one component,
15 performance. I think the thing is, I think with existing
16 buildings the point I think we need to make is we want
17 improvement. It's not just -- you're not using any more
18 energy, we want you to use less energy. And whether you
19 change one component or two, or 100 --

20 MR. SHIRAKH: We could drop that language, I
21 think that is going to take care of it basically; if you
22 only model one component, that doesn't have -- it's not
23 going to pass. So maybe it is duplicative to have that
24 language.

25 MR. NESBITT: That was one of the updates I think

1 in CBECC-RES was this issue, but, I mean, can it really
2 tell the difference between altering two windows? Or if
3 it's one window and one wall? Or is it that basically two
4 things have to have an existing and a new versus -- because
5 sometimes, depending on how you model, I mean, all your
6 windows are together or they're all separate, it just -- I
7 mean, prior to 2013, basically no improvement was complying
8 with the code for alterations, essentially.

9 We want to see improvement and in that sense the
10 change in the baseline for alterations to a higher standard
11 if you don't verify it versus existing is pushing you
12 towards better. And so you know, I think we really need to
13 think with existing buildings that if you're going to alter
14 it, it has to become better: lighting retrofit, if you're
15 reducing energy use, that's better. Even though we can't
16 necessarily go to New Code. And whether it's one component
17 or 100 --

18 MR. SHIRAKH: Okay, can we -- Nehemiah, do you
19 want to --

20 MR. STONE: Very quickly. First off, I don't
21 think this is a problem that needs to be solved, I think
22 it's somebody paying a little too much attention to exact a
23 certain kind of wording, but that being the case, I would
24 like to offer two possible solutions: 1) just add another
25 sentence that says we're talking about components, not

1 categories of components, so they can be in the same
2 category.

3 MR. SHIRAKH: I think I made that clarification
4 for 2016.

5 MR. STONE: Okay, the other is to offer a
6 worksheet where somebody can come up with a weighted
7 average of U-Factor for the windows and show that they met
8 the Prescriptive Standards because that's all you're asking
9 them to do by creating the model.

10 MR. SHIRAKH: Payam is saying we've done that.

11 MR. BOZORGCHAMI: We have that.

12 MR. STONE: Well, then your problem is solved.
13 Next one? I'm always coming up with answers that somebody
14 has already implemented.

15 MR. SPLITT: It just seems like we're not
16 understanding what I'm talking -- what performance is.
17 We're talking about one or two items as if somehow I'm just
18 doing a Performance calc on two windows. I'm doing a
19 Performance calc on the whole building. And what I'm doing
20 is I'm comparing the building before I made the change to
21 the building after I made the change.

22 So the standard building is the building before I
23 made the change, and the performance and its calculation is
24 after the change. There's a whole big section in here in
25 Table 150.2(B) that tells us how to model standard design

1 for an altered component. It's all there. It's just that
2 in my mind you're saying we had to alter two things; I'm
3 saying no, I just altered the windows, you know? And in
4 the program, it essentially is doing an area weighted
5 average because it's calculating the effect of all those
6 windows, so it's internally doing that.

7 MR. SHIRAKH: So you can do what you're
8 describing.

9 MR. SPLITT: But I've had Building Officials come
10 back and say, well, wait --

11 MR. SHIRAKH: I understand that and I think I've
12 made that clarification for 2016.

13 MR. SPLITT: Okay. The next one was Section
14 141.0(B)(1) and it's my same topic again, this had to do
15 with mandatory minimum insulation for nonres alternative.
16 So it's my same deal, that there has to be some leeway for
17 special cases.

18 MR. SHIRAKH: I think that your comment there was
19 that if you're taking credit for alteration, all altered
20 components must be subject to third party verification. I
21 think the language is a little bit ambiguous and I think we
22 made a clarification in 2016 that, no, only the components
23 for which you're claiming credit should be subject to --

24 MR. SPLITT: Right, that was another one I -- oh,
25 I added two in there, right. So I skipped that one, you're

1 right. And that was a problem, it says all components
2 proposed for alteration must be verified.

3 MR. SHIRAKH: So I talked to the authors of that
4 section, which happens to be myself and Mike Gable, and we
5 both agreed that the intent was only for the components for
6 which you're taking credit, and there's no point in having
7 you do roof insulation inspection when you're only doing
8 windows, so --

9 MR. SPLITT: Well, there's a HERS Rater here,
10 see, he'll come at me. But what I do sometimes is I'll
11 have a Victorian in Berkeley or something that they're
12 making extensive renovations, and the house has no wall
13 insulation at all, and it's been added onto several times,
14 so there's all kinds of different windows in this thing,
15 and so I'm now going to have to do -- they're going to take
16 credit for they're putting in new windows, we're going to
17 slate all the walls and floor and attic, but by just taking
18 verification of the existing insulation levels in the walls
19 that they're going to fix, I then don't have to take credit
20 for improving the windows because insulating a whole house
21 that's uninsulated walls, roof and floor, makes a huge
22 difference.

23 So even if they're going to put in these much
24 better windows, I didn't actually have to go back and take
25 credit, and I didn't want to take credit because it would

1 be very complicated for the HERS Rater to go out there
2 because the windows are all different.

3 MR. SHIRAKH: Right.

4 MR. SPLITT: And it would just complicate things.
5 And the house was already passing, so there was no need to
6 do that and it would just be an extra cost. So that's what
7 that one was.

8 MR. SHIRAKH: We fixed that for 2016 and we'll be
9 happy to talk to building departments for 2013.

10 MR. SPLITT: Okay, the next one was Section
11 141.0(b)(2)(B)(iii), and this has to do with when you're
12 reroofing in a commercial space, and it assumes that all
13 commercial roofs, insulation is right on the roof deck.
14 But my complaint was on, well, there's a lot of commercial
15 buildings, and I gave the example of an old Victorian that
16 was converted into offices, where it actually has attic
17 above. And the insulation is not in the roof, it's in the
18 attic floor. And to be a shake roof and they're roofing
19 the building. Well, they shouldn't have to put insulation
20 right under those shakes because there's plenty of
21 insulation already there.

22 MR. SHIRAKH: I see someone anxiously wants to
23 respond here.

24 MR. BOZORGCHAMI: Sorry. So I think the area
25 you're talking about -- this is Payam, thank you -- is when

1 we're doing a re-roof as an alteration under Section -- you
2 have the table that says you have to put an R-8 or an R-14,
3 depending on the location and the type of roof it is. But
4 there's also an exception that says if you already have
5 insulation or you meet a certain U-Factor. So the criteria
6 says insulation of the roof deck, but normally in a non-
7 residential building you put it at the roof deck, above the
8 roof deck. But you could also meet the U-Factor criteria.
9 U-Factor criteria, if you have an attic, we have a table, a
10 directory that deals with U-Factors for attics. You don't
11 have to do an R-Value, you could do a U-Factor, and there's
12 an assumption built into it.

13 MR. SPLITT: But it's not clear that by taking a
14 U-Factor for an attic is the same as an equivalent U-
15 Factor; it seems like it wants an equivalent U-Factor for
16 the roof, and the roof isn't the attic. So maybe there's
17 just more clarification that needs to be done there.

18 MR. BOZORGCHAMI: Okay, so that would be
19 something we could clarify in the manual, but I don't
20 foresee it being a stopper here because we have either an
21 R-Value or a U-Factor. And how you get to the U-Factor, if
22 you have an attic you could take attic air space, you have
23 to up the roof deck, you have the ceiling insulation, and
24 so forth.

25 MS. MACDONALD: So it sounds - this is Rachel

1 MACDONALD -- I just want to interject. It sounds like
2 clarification would just resolve a lot of this, like you
3 just mentioned, Payam.

4 MR. BOZORGCHAMI: It's based on a vaulted
5 ceiling, or a cathedral ceiling, but you could also do it
6 with U-Factor.

7 MR. SPLITT: Yeah, well, that's the whole point.
8 To me, it's just looking at the roof and the attic is
9 something totally different, so if we could do either, then
10 that would solve the problem.

11 MS. MACDONALD: What was that section again?

12 MR. SPLITT: 141.0(b)2.B(iii).

13 MS. MACDONALD: Okay, thank you.

14 MR. STONE: I apologize if this is the wrong
15 section of 141, but I noticed in the Commission's response
16 to Pat on one of these issues where you said that it only
17 applies to low sloped roofs, when you go back and read that
18 section of the Code, it doesn't say that, so either you
19 need to amend the response or, if that's what you intended
20 in the Code language, you need to change that Code
21 language. The section right above it actually says for low
22 sloped do this, for high sloped, do that. And the next
23 section down, the one that he's pointing to, doesn't say
24 anything about low slope or high slope, so it appears it
25 applies to all roofs.

1 MR. BOZORGCHAMI: Nehemiah, stay here. It's
2 referring to a low slope section, so it is a low slope
3 roof, (i) (a) and (ii) (a), so those are all low sloped
4 roofs.

5 MR. STONE: All right, so when this one says low
6 slope, steep slope, and the next one doesn't say --

7 MR. BOZORGCHAMI: This is not based for steep
8 slopes, this is referring to a low slope to see if it says
9 "recoverable and meets the sections of (a) --

10 MR. STONE: So what it's referring back to is --

11 MR. BOZORGCHAMI: Back to here, yes.

12 MR. PENNINGTON: So that's what the violations
13 say, maybe add the words in, or --

14 MR. SPLITT: Well, it's an example of how, we
15 read these Codes all the time and we still get confused.

16 MR. SHIRAKH: Bill, you only get three
17 violations.

18 MR. PENNINGTON: You've got to get me a mic.

19 MS. MACDONALD: I'm watching all of this unfold
20 and thinking this is a good next step is to have period
21 revisiting of stakeholder and staff meetings to vet these
22 things out. Bill, did you want --

23 MR. PENNINGTON: No, I'm done -- for now.

24 MR. SPLITT: Okay, the next one was
25 141.0(b) (2) (I). It has to do with indoor lighting

1 alterations in nonres. And in these sections there's
2 tables that now they say for each enclosed space, and it
3 seems to imply that each enclosed space that's being
4 altered individually has to meet the wattage requirements
5 for whatever is going on in that space. And it's always
6 been the case that, for conditioned space lighting, you
7 calculate the allowed wattage actually even tighter than
8 each enclosed space, each task area, and you add up and get
9 the total allowed wattage for the total space that's being
10 altered.

11 And then you add up all the lighting wattage and
12 the total has to be less than the allowed. Each room
13 doesn't have to be less than the allowed. So I can have a
14 reception area with a great big candelabra or something in
15 there that's using a lot of light if I make it up in other
16 offices and stuff. So this "each enclosed space" just came
17 out of nowhere and it's just not right.

18 MR. SHIRAKH: That's true for area category
19 method, you know, you can come up with a total budget for
20 the building and you can do tradeoffs amongst different
21 spaces. So something probably Peter needs to look into.

22 MR. STRAIT: Okay.

23 MR. SPLITT: So it makes a big difference. The
24 only thing you can't make tradeoffs on are between indoor
25 and outdoor lighting, they're separate. But otherwise you

1 can make tradeoffs against wattage.

2 MR. SHIRAKH: Conditioned, unconditioned, all of
3 that is true, you can do tradeoffs among different
4 categories. So if you have language in there that
5 conflicts with that, we need to take care of it.

6 MR. SPLITT: And, hmmm, Section -- I'm losing my
7 voice, just a second here, this could be a lucky day.

8 MR. STRAIT: We do have a Public Advisor, you
9 give him the comments.

10 MR. SPLITT: Section 41.0(b)(2)(I)(iii)(b)(1).

11 Now I've got to find it. You know, it had to do
12 with modifications in place and whether that was done in
13 conjunction with any sort of other alterations to the
14 space. And it basically wasn't allowing it, and I'm saying
15 I don't know why if somebody is doing the modifications in
16 place and it really is a modification in place of lighting,
17 if they're doing something else like painting the walls, or
18 whatever they're doing, why should that disqualify them
19 from the modification in place which doesn't affect the
20 lighting at all?

21 It's just something else that they're doing. So
22 they should still be allowed to do the modification in
23 place, they shouldn't have to do it in two separate weeks,
24 one week paint their walls or whatever they're going to do,
25 and then they have somebody else come in a week later to do

1 the modification in place, so they say they're not
2 connected. They should be able to go in there and shut the
3 place down for a day and get everything done and be out of
4 there.

5 MR. SHIRAKH: So this whole section has been
6 completely revised. I think it resolves your issue with
7 the proposed 2016 language and so I don't know whether that
8 response was for 2013.

9 MR. STRAIT: Well, since we're still
10 investigating what we can do, we have those standing
11 requests to see what we can do to get the 2016 Standards,
12 whatever we land on there, implemented more quickly or
13 somehow create some way to get there. I think that's going
14 to be wrapped up in that. I don't think we're at a point
15 where we can discuss at this table, you know, what that's
16 going to look like, but we definitely agree the intent of
17 that language was not to say that you can't paint the walls
18 the same time you do a lighting retrofit.

19 I think that language was intended -- I say I
20 think because I wasn't part of the process at that time --
21 more to try to capture gut remodel kind of circumstances,
22 so where you have a gut remodeling and you're doing a lot
23 of things, then that would bring it in, but if all you're
24 doing is a separate project that happens to be in the same
25 space, but there's no overlap, that it wasn't the intent

1 because you're doing some completely unrelated thing,
2 therefore you can't take the same path for lighting.

3 MR. SPLITT: Okay. So it might be nice if we
4 can't change the Regulation right now if we can come up
5 with some blueprint interpretation or something that sort
6 of -- I would know that didn't count, but nobody else
7 would.

8 MS. GEISZLER: Peter, do you have access to the
9 staff responses that are in the docket? Because it would
10 be good to go back to those.

11 MR. STRAIT: Yes.

12 MS. MACDONALD: I have a copy of them.

13 MR. STRAIT: We could pull them up on the screen,
14 I believe. I think we do have some -- we did respond to
15 that topic and the response will be prepared for Pat, so I
16 think I might just be reiterating that without realizing
17 it. Yeah, I am just reiterating -- "Other alteration
18 spaces do not involve alterations of luminaire lighting
19 systems such as repainting walls or relevant..." So, yeah,
20 the language in here, and so I'm understanding, Pat, that
21 we should do something like this, or a statement like this
22 in a Blueprint or some other communication, too. So we can
23 certainly look at that.

24 MR. SPLITT: Because people are playing games
25 just to get around it by having people coming in two

1 different days and it just costs more money and it's silly.

2 MR. STRAIT: Sure.

3 MR. SPLITT: Okay, another comment on Table
4 141.0(e), and this is for the requirements for luminaire
5 alterations. And in particular, the last line, it's not
6 clear when they say alterations that change the area of the
7 enclosed space or the space type, or increase the lighting
8 power, it has to meet all these requirement. Well,
9 changing the space type means -- I don't know what that
10 means. That means I had an office that I now make a
11 reception area? And now I've got to make the whole thing
12 comply with all the lighting requirements even though I
13 didn't change any lighting at all?

14 MR. STRAIT: I think this goes back to the
15 altered components scoping in the section. MR.

16 SPLITT: No, well, this is a little bit different because
17 this has a separate section right at the bottom and for the
18 quantity of affected luminaires, it's any number. Well,
19 that could be one, it could be zero. That's, you know, and
20 then you have to meet everything, so if I changed one light
21 fixture in there, but it was also a change in space type to
22 a different area category, I'd have to bring all the
23 switching, everything just because I changed one fixture.

24 MR. THOMAS: This is Gene Thomas, I could comment
25 on that a little bit, I mean, that's basically saying if

1 you take a conference room and turn it into a kitchen,
2 you're changing the characteristics of that space type
3 substantially. Or if you're increasing changing the area
4 of the room, you're taking two offices and knocking out the
5 partition and turning it into a conference room. We have
6 some issues with that provision like you do, but I think
7 that's substantially fixed in the 2016 draft language, so
8 our concern, our present concerns with the implementation
9 now that we would have go away with the new Standards.

10 MR. SPLITT: Well, that's what I'm talking about
11 is now. Because I could have that same situation where it
12 went from office to conference, but it may be added one
13 light fixture, I wanted something hanging down over the
14 conference table. This says I have to change everything,
15 all the lighting has to meet the wattage requirements, all
16 the switching, everything because I added one light
17 fixture, just because I change its area category. It's
18 just too complex. So if there's a fix that we can somehow
19 implement currently, that's great.

20 Section 150.0(j)(1)(a). So I've wrote these down
21 as they came in my mind instead of putting them in
22 sequence, so this is my twisted thought process, this is
23 coming back to bite me now.

24 MR. OLVERA: Hey, Pat, real quick, this is Chris
25 Olvera with the California Energy Commission, if I could

1 just clarify or just emphasize that for adding lighting,
2 the threshold was the same for 2008. This trigger was the
3 same, but the requirements are more stringent, and I think
4 that's your concern.

5 MR. SPLITT: Well, and also just the change in
6 area category or, you know, the use of the room.

7 MR. OLVERA: Correct. Yeah. Just for the
8 trigger of adding lighting, that trigger was the same in
9 2008, 2005, but the requirements are different, so that's
10 been noted. But I just wanted to emphasize that. But the
11 trigger is the same, the requirements are different now.

12 MR. SPLITT: Okay. You always have to go to the
13 beginning and start back.

14 MR. STRAIT: I can say from the letter that's in
15 front of me, the 150.4(J)(1)(A), we're talking about, that
16 must be storage water heaters where we add references. We
17 added some language that was obsoleted by some changes in
18 Federal law and we removed that language from 2016.

19 MR. SPLITT: Yeah. So there's a requirement that
20 it says if we were less than the Federal Standard or just
21 met it, we had to add an R-12 blanket. But that's the only
22 water heater that needed an R-12 blanket, it was even
23 slightly more efficient, you didn't have to add anything.
24 So the only water heaters that would have to add this R-12
25 blanket were ones that were exactly the Federal minimum.

1 You know, that doesn't make sense, either add it or don't
2 add it. And then I was commenting on the fact that the R-
3 12 is leftover from years ago when the minimum R value in
4 the tank was R-4, and the Commission's goal was to get to
5 an R-16 total and that pretty much most of I think the new
6 water heaters, to get to the new Federal Standards,
7 actually have R-16 insulation in them now. So they don't
8 need any blanket.

9 And as a comment, just in the software that I'm
10 using, it still asks, when it's asking for insulation value
11 for the tank, it only asks for the blanket insulation, it
12 never asks for the internal insulation. So even though I
13 don't need any insulation, now I have to say it's R-12 or
14 16, or else it penalizes me for it. So something has to be
15 fixed there. Just an aside.

16 Section 150.0(j)(2)(A)(B) and (C) has to do with
17 pipe insulation. The pipe insulation requirements all
18 actually came from ASHRAE 90.1, which are nonres standards.
19 So technically they don't apply at all to residential. And
20 in residential buildings where we're trying to insulate
21 pipes in residences that don't have a lot of room, you
22 know, commercial buildings have big dropped ceilings you
23 can put all the insulation you want around a pipe; but in
24 houses, they don't have that.

25 And we're trying to run PEX piping and one of the

1 advantages of that is because it's more flexible. Well, if
2 you put two inches of insulation around it, it's not
3 flexible anymore. So I'm thinking that something has to be
4 done about that and what I would recommend is Gary Klein
5 has a proposal that he's actually gotten some jurisdictions
6 in other states to approve already that is a pipe
7 insulation requirement for residential buildings that I
8 think is more reasonable. The larger pipe sizes, it's
9 pretty much the same as what we have now, but below one
10 inch the insulation gets smaller.

11 So I would recommend that, for residential at
12 least, you try to adopt Gary Klein's insulation
13 requirements. He's got a whole big write-up on it.

14 MR. STONE: My reading and response was that in
15 your Response to the Petition, was that you saw no
16 particulars from Pat as to how this actually is a problem,
17 and I apologize, Pat, but I haven't heard from you a
18 response to that, I haven't heard, you know, how is this
19 really a problem? Because the case study showed that the
20 kind of insulation being required actually can work where
21 it's being required. So can you give us some specifics
22 about why you think this is actually a problem?

23 MR. SPLITT: Well, yeah. I work on a lot of
24 hydronic heating systems and we're running half-inch PEX
25 around them to rate heaters and we're snaking them around -

1 - one of the reasons you use the PEX is so you can sort of
2 snake it and feed it through these fairly obscure paths to
3 get to where you have to get to for the radiators. And
4 when you're calling a one-inch insulation, that's the wall
5 thickness of the insulation, so that's one-inch on this
6 side of the pipe and another inch on the other side of the
7 pipe, plus the thickness of the pipe. So now we're like
8 almost three inches thick that you're trying to snake
9 through a building, and it doesn't snake. It's just, you
10 know, so what happens is people don't put it in at all.

11 So it would be more reasonable to put in what
12 Gary would suggest is below one-inch, you put the
13 insulation thickness is the same thickness as the pipe. So
14 if I had half-inch pipe, the insulation would be half-inch,
15 so it's half-inch on this side, half-inch on this side,
16 it's still an inch and a half across, that's not small, and
17 we're going through 2 X 4 walls which are only three and a
18 half inches thick, you know, it would be almost -- you
19 know, in some instances it's really impossible to get a
20 three inch thick insulated pipe through a three and a half
21 inch opening. Because what do you do when you have to
22 drill through a stud? Either you drill all the way through
23 and there's no stud left, or you end up having to put
24 little bitty pieces of insulation in each stud bay as
25 you're running along.

1 There's just a lot of things, it's very difficult
2 to install pipe that thick when you're trying to do run-
3 outs. In the actual mechanical room where you've got big,
4 you know, inch and a quarter pipes running around between
5 the boiler and the tank, there there's no problem with an
6 insulation, you've got a whole room you can put insulation
7 in, it's when you're running the distribution lines going
8 out to the terminals that are the problem.

9 MR. NESBITT: George Nesbitt. What I suggested
10 in the 2013 update was that the table be changed to an R-
11 Value table, rather than a thickness based on a K value.
12 And I believe these tables are primarily based off of
13 essentially a fiberglass pipe insulation, whereas when you
14 get into the foam you have a higher R- value per inch and
15 you can have it thinner. And so when I go to the plumbing
16 supply house, I buy pipe insulation based on the pipe size
17 I'm going to put it on, and wall thickness, which has a
18 corresponding R-value. It's not -- well, give me one inch
19 of a K-value of such and such and such because I have a
20 two-inch pipe, no.

21 I mean, maybe that's how engineers at ASHRAE
22 think, you know, back in the office and they have tables,
23 but when those of us in the world that go and buy things,
24 we're not buying it that way. So that would make it
25 clearer that you're installing a certain R-value. What

1 type of insulation and what thickness it is depends on what
2 you want to buy and what you want to pay.

3 MR. STONE: I don't mean to be co-opting your
4 meeting, I apologize, but I still don't understand, Pat,
5 because the example you gave would not be solved by the
6 solution that you gave. So if Gary's client's solution is
7 the thickness of the insulation be the same as the
8 thickness of the pipe, then in the example you gave where
9 you've got a one-inch PEX pipe, that when you put that
10 insulation on that's required here, it becomes three inches
11 thick, you have that exact same situation. So when you're
12 looking at Gary Klein's solution, how does that solve the
13 problem that you're laying out? I don't see it.

14 MR. SPLITT: Well, maybe I picked a bad example.
15 Normally the way these things go, you don't go through the
16 wall any more than you have to. So there are places where
17 you'd have to do that, but it's certainly going to be a lot
18 easier to do it with smaller pipe than thicker pipe
19 insulation because there are instances that you could go
20 through a wall if it was an inch and a half. You know, not
21 every stud in the wall is structural.

22 So where we're talking about is probably maybe
23 under the window where we're trying to get to this
24 radiator, the plaque up here, and we have to get over
25 because we have to get to where the radiator connects to

1 the wall, so we just have to get into that space. But it's
2 still doing the rigid fiberglass or whatever, that thick,
3 it just isn't, nobody does do it and just nobody is going
4 to do it. And if you look at, well, this is a different
5 example, but if you look at solar water systems where they
6 have pre-designed tubing, pairs of tubing and the control
7 ware that goes back and forth between the panels and the
8 tank, none of those have that one-inch thick insulation.

9 MR. OLVERA: So, Pat, this is Chris Olvera from
10 the California Energy Commission. Just to clarify, so the
11 section you're referring to, there is an exception for the
12 piping that's actually penetrating the framing, so you
13 won't have to drill, you know, a three-inch hole through
14 the framing, it would only be an inch of piping and then
15 you'd insulate between framing members, so I just wanted to
16 clarify that.

17 MR. SPLITT: Right, that's true, but it's just
18 this big thing that's going in there now, when you get
19 something that big and you're trying to, well, I don't want
20 to get into it, but you get problems with people trying to
21 install insulation or just doing domestic hot water pipes
22 if we're trying to insulate all the way out to the kitchen
23 sink. It's just a lot easier to snake this thing, to have
24 it able to snake. That's one reason we used PEX piping.
25 And if you put this big thick insulation in, it doesn't

1 snake anymore, so you lose the advantage, one of the
2 advantages of the PEX piping is that you can fish it around
3 the floor and around to get to where you have to go. It's,
4 you know, you can do that if it's only a half an inch thick
5 and you have enough space, but once the insulation gets
6 that thick, it doesn't snake anymore. So that was it.

7 MR. ZHANG: May I comment?

8 MR. SPLITT: Sure.

9 MR. ZHANG: Yeah, so maybe I just have a comment.
10 You mentioned the advantage that it can be snaked in
11 basically easy installation, but I feel that as a post-
12 consult doing that, you know, we know that implementing
13 some of the efficiency measures can get things complicated,
14 I mean, do we want to just take the approach that makes
15 things easier and forget the importance of energy savings,
16 in a sense doing things more correctly, more structured way
17 to solve the problem? Basically saying when you design the
18 plumbing, you actually have to be thinking about structures
19 of the layout.

20 I think this is one issue, especially related to
21 DHF system, we tend to see people just kind of laying out
22 piping without any considerations, excessive long pipes,
23 for example Gary has been long time discussing this issue,
24 advocating more structure for plumbing. So I think this is
25 kind of related, yes, I mean, it's easier for people to do

1 and it's their so-called common practice, but is it
2 something we should change? I think that's my comment.

3 MR. SPLITT: Okay, well, we'll get back to Gary.
4 I mean, for doing PEX piping, then there's a very good
5 reason to do structured piping and in that we're going to
6 have manifolds out near where the fixtures are, like I'll
7 have a manifold near the master bath, and then I'll run --
8 maybe I have three-quarter-inch pipe going to the manifold
9 and half-inch tubes going out to the fixtures, and he'd
10 like to see less than half-inch, but the Plumbing Code
11 doesn't like that yet. But the thing is, imagine if we had
12 this one-inch thick tubing insulation on the half-inch
13 tubing, so it's three inches thick, and I've got eight of
14 those coming back to the manifold. Each one is, you know,
15 it can't actually connect to the manifold because they're
16 too thick.

17 What you'd have to do is I guess build a new
18 manifold that would be custom made instead of using
19 existing manifolds where they're much closer together. So
20 I'd have insulation thinner so that you can actually run
21 the tubing and get them all into this one space, is much
22 more convenient because the Architect, again, never leaves
23 space for any of this stuff anyway, so just to try to get
24 them to put a place in for a manifold at all is a miracle,
25 and then to say my manifold has got to be three feet long,

1 you know, it's not going to happen.

2 So anyway, that's enough on that one.

3 MR. OLVERA: Pat, real quick, this is Chris
4 Olvera at the California Energy Commission, I just want to
5 point out, too, that you're talking about through walls,
6 etc., too, that there's an exception for the same section
7 you're referring to that if you have QII, this is more
8 equivalent to new construction, but if you have QII the
9 piping doesn't need to be insulated in the interior or
10 exterior walls, so that's another option you could seek, as
11 well.

12 MR. SANGUINETTI: Because that's conditioned
13 space?

14 MR. OLVERA: It says piping interior or exterior
15 walls, if you are claiming and you comply with the QII
16 requirements, the piping does not need to be insulated.

17 MR. SPLITT: The problem with that is there's a
18 lot of other requirements that get popped on once you say
19 QII. So it's a cost thing.

20 MR. STRAIT: Is that with the assumption that the
21 insulation that's in the wall as wall insulation will pull
22 double-duty and basically also insulate the pipes?

23 MR. OLVERA: When installed properly, yeah.

24 MR. SPLITT: So I had another comment and it had
25 to do with a section where it deals with underground piping

1 and where it's supposed to be insulated, but you're
2 supposed to somehow be able to replace the pipes by somehow
3 pulling them out of the insulation? And most of the new
4 plumbing systems that deal with insulated and underground
5 piping, there are assemblies that are all PEX tubing and
6 some insulation, and then there's a corrugated plastic
7 covering, that these are dropped in a trench and then
8 they're sort of snaked around and get from like the garage
9 to the house or whatever it's going, and you can't pull
10 those tubes out of that thing and replace them.

11 And that's a standard underground plumbing system
12 for residential, if you're going between buildings or
13 something. It's absolutely impossible to do that. And
14 even if you had tubing, copper tubing, and you made plastic
15 pipe enclosures and you were going from here to there,
16 you're coming down to go underground over here and then
17 back up, well, how do you pull it out without -- you can't
18 pull it out because there's elbows in there. If it was a
19 straight line, it wouldn't be underground. So that
20 requirement is a little bit hard to meet.

21 MR. STRAIT: So quick question. If there is a
22 leak that's discovered in underground piping like that,
23 does that mean you would have to replace the entire run?

24 MR. SPLITT: No, but if there was a leak in the
25 system, I mean, it's all tested before you bury it again,

1 and there are no joints in the pipe underground, it's PEX
2 tubing, so the way you would get a leak is if somebody was
3 digging somewhere and they dug into it, well, then you know
4 where the leak is, you just put your shovel through the
5 piping and you can just cut that section out and replace
6 it.

7 MS. MACDONALD: Mike Bachand.

8 MR. BACHAND: Hi, it's Mike Bachand. In a former
9 life I was a builder and I built a few houses that leaked
10 under the slab, unfortunately, and easiest cause, easiest
11 effect (indiscernible).

12 MS. MACDONALD: Thank you.

13 MR. SPLITT: Okay, then the next one was
14 reference to (j)(a)(2) and this was just a comment on
15 changing the way we figure out Climate Zones by going to
16 Zip Codes, and the previous version of the Climate Zone
17 Maps were created with the help of CALBO to sort of keep
18 their climate zone in their jurisdictions consistent. And
19 with this new zip code thing, at least I know right in
20 Santa Cruz County where there are some zip codes that
21 actually are in Santa Cruz County, but the road comes from
22 Santa Clara County, so they have a Santa Clara mailing
23 list.

24 So all of a sudden the County has some houses
25 maybe just a quarter mile apart that are in two different

1 Climate Zones, and you can see one from the other, so now
2 Santa Cruz County is having to deal with two Climate Zones
3 when they didn't have two before, and I'm sure this has
4 happened in some other places, and it doesn't seem like
5 it's helping anybody except somebody who is maybe thinking
6 in the future they're going to come up with a database, and
7 now it's easier to look up Zip Codes and figure out what
8 Climate Zone it is. But it's not helping the enforcement.

9 Okay, this is my favorite topic, so this one I'm
10 going to take a little bit of time on, even though we don't
11 have a lot of time. Section 110.2(a)(3), and this has to
12 do up in the front of the Standards, there's a whole
13 section there on minimum efficiencies for equipment. And
14 basically all of this chapter, all of the tables, came from
15 ASHRAE 90.1. So even though the section applies to all
16 equipment, Res and nonres, it doesn't make a distinction,
17 the source of the efficiencies is 90.1, which is strictly a
18 nonres Standard.

19 So what happens is there was a statement in there
20 that said if you had equipment that does more than one
21 function like space heating and air-conditioning, that that
22 equipment had to meet both standards. Well, that's true,
23 but then you added another statement basically saying that,
24 well, if it also has two functions where it does space
25 heating and water heating, it has to be both efficiencies.

1 And that is not correct as far as ASHRAE 90.1,
2 it's very clear in saying you don't do that for water
3 heating, only for space heating and space cooling. So the
4 actual -- well, here is the wording exactly from the Code,
5 "Where equipment can serve more than one function such as
6 both heating and cooling, or both space heating and water
7 heating, it shall comply with all the efficiency Standards
8 applicable for each function."

9 But the action section in 90.1 says -- this is
10 Section 6.4.1.1., Minimum Equipment Efficiencies, it says,
11 "Equipment shown in Table 68.1 through 68.1(g)...," these are
12 basically the same tables we've adopted, "...shall have
13 minimum performance at the specified rating conditions when
14 tested in accordance with the specified test procedure when
15 multiple rating conditions or performance requirements are
16 provided the equipment shall satisfy all rating
17 requirements." So it says required that were provided in
18 the tables, so it's only on tables, and there's nowhere in
19 there, anywhere, in any of those tables where they have
20 combination specifications for space heating and water
21 heating, it's not there.

22 Then further on down it says, "Equipment used to
23 provide water heating functions as part of a combination
24 system shall satisfy all stated requirements for the
25 appropriate space heating or cooling category." Did it say

1 anything about water heating? No. It just says it has to
2 provide the requirements for space heating or cooling.

3 There's a user's manual for ASHRAE 90.1, so the
4 user manual for this section has two items it calls out.
5 Multiple Efficiency Requirements: some equipment has more
6 than one efficiency requirement. For example, a typical
7 air-conditioning unit with a gas furnace will have an EER
8 and part load efficiency and a furnace efficiency from
9 another table. To comply, the equipment must satisfy all
10 stated conditions, heating, space heating, and cooling."

11 Next it says, "Combined space and water heating
12 equipment." Equipment that provides both space and water
13 heating must comply with the efficiency requirements of the
14 primary function. For example, a space heating boiler that
15 also provides service water must comply with boiler
16 efficiency requirements. A water heater that also provides
17 space heating requirements must comply with the water
18 heating requirements," only what it's mainly designed for.

19 I bet there's 100,000 combined hydronic systems
20 in this state where they're apartments or condos where the
21 heating source is a residential tank water heater, it might
22 have some side ports on it, and those side ports connect to
23 a first company fan coil up in a dropped ceiling, to blow
24 hot air out to the space. That water heater is listed as a
25 water heater. You're never going to find one that's listed

1 as a boiler, it's not a boiler, it's not going to get
2 listed and they're used just all over the State.

3 Same thing the other way around where I have a
4 boiler and indirect tank. Most boilers are also not listed
5 as water heaters. There actually are a few European models
6 that were first introduced as wall-hung tankless water
7 heaters that first got certified as a water heater. And
8 then the vendors wanted to also use them for space heating
9 and they said, "Well, sure you can do that."

10 And then building departments came back and said,
11 "Well, wait, you need an H Stamp, it has to be tested for a
12 boiler." So then they already had it set up for water
13 heaters, they added the boiler testing because the building
14 department wouldn't let them install it. But they didn't
15 go out initially to say, well, we're going to rate it both
16 ways, it just worked out that way. But for most of them,
17 it's just one or the other. And so it's just --

18 MR. STRAIT: Just to ask a question, is this a
19 case where devices would fail to meet one or the other
20 Standard if they tested both?

21 MR. SPLITT: There's no test for them.

22 MR. STRAIT: Or is this a case where it's just
23 that the manufacturers aren't performing both tests?

24 MR. SPLITT: No, there is no test. I mean, you
25 can't test a water heater, a tank water heater, that's a

1 boiler. I mean, it would never pass because the use is
2 totally different. The pressure requirements -- a water
3 heater just takes cold water and heats it up once and it
4 goes off somewhere. A boiler recirculates water, so it
5 heats it once, and it comes back and it heats it again, and
6 it heats it again, so it can get really hot, it can
7 generate steam. So there has to be special -- it's a much
8 more rigorous test to test it as a boiler because if you
9 generate steam, then something can blow up and kill
10 somebody.

11 MR. PENNINGTON: Pat, I don't recall you
12 submitting all that information when you originally made
13 your comment. It would be helpful to see what that says
14 and what the User Manual says, so could you provide that to
15 us?

16 MR. SPLITT: Well, I don't remember. Maybe I did
17 that, I thought I did, but I'll redo it then.

18 MR. PENNINGTON: Okay, if you can hand it to us,
19 that would be --

20 MR. SPLITT: Yep, yep. All right, just one last
21 thing before I -- there's another section in Section
22 90.1.7.5.2, Service Water Heating Equipment. "Service
23 Water Heating Equipment used to provide the additional
24 function of space heating as part of a combination
25 integrated system shall satisfy all stated requirements for

1 the service water heating equipment." So it's a Service
2 Water Heater, it's a Service Water Heater, it doesn't
3 matter that it's space heating.

4 So anyway, I'll send you all this stuff.

5 MR. PENNINGTON: Do you have it right now that
6 you can give it to us?

7 MR. SPLITT: Well, I do, but it's my only copy
8 and then I'll forget where I got it, so I'll send it to
9 you. And let's see what else we have here.

10 Well, I had a comment about the Certificates of
11 Verification that there's some things in nonres where
12 they're actually supposed to be listed in the Residential
13 Certification List, and the last time I checked, it wasn't
14 really obvious how to do this, there apparently is a way of
15 doing it that isn't really clear to people how that
16 happens.

17 MR. FERRIS: So they are available, so you'd want
18 to check with your HERS Provider as to the process, but
19 from what I understand, a HERS Rater self-certifies,
20 basically says, "I have a nonres testing," and at that
21 point, once they've initiated the project, then that form
22 becomes available.

23 MR. SPLITT: Okay, then I complained about pipe
24 insulation again, so it's the same comments, we won't go
25 back there again. Then I had a comment about design

1 phase/design review and the requirement for that to be done
2 by a licensed engineer.

3 Almost nobody is doing this, and I said in one
4 large job where they actually hired a guy because they
5 said, well, you need somebody to do this, so they hired an
6 engineer and he sat in on our team meeting, introduced
7 himself, and said he'll be doing acceptance testing, and
8 that was the last he said. Last we heard from him, until a
9 week before we submitted for a building permit, then all of
10 a sudden he sent out these forms to everybody, you know,
11 that's supposed to be the basis of design and all this
12 stuff? And had everyone fill it in basically with what
13 they'd designed.

14 So miraculously, what's in the building happened
15 to be exactly what these forms said we were going to put in
16 the building because that's what they put in the form.
17 They didn't actually do anything upfront to talk to the
18 building owner and decide what we wanted to do and, you
19 know, we've got to do acceptance testing, none of that was
20 done. The forms were just filled out a week before we
21 submit it. And it turned out that really this engineer
22 really didn't know anything about Title 24.

23 So I don't think having the requirement be --
24 you're having it be an engineer because you want somebody
25 with liability to sign for it, but you know, he's actually

1 also doing the acceptance test, so I suspect once it
2 passes, nobody is going to complain about anything.

3 So I just think there's something intrusive about
4 that, that if you're really going to have somebody sit in
5 at these meetings, they should actually have to do
6 something for the money they're getting paid. And, you
7 know, I wouldn't want to say that I would recommend that
8 they should be CEAs or something like that, somebody who
9 knew something about energy, but maybe something similar to
10 that. Since I'm a CEA, I think that would be a great idea.

11 But there's nothing to say that an engineer can't
12 become a CEA, he just has to pass the test, so now you have
13 an Engineer that knows the Energy Code. What a concept!
14 So maybe you'll have to combine something like that, but
15 the way it's working now, it doesn't work, it's just most
16 people ignore it. If you do get somebody who knows the
17 requirements there, it's just going through the steps.

18 And just one more thing about register just
19 popped in my mind, as I said before, I've submitted a lot
20 of jobs and no one has ever called me up and had me
21 transfer a project to them, so the reason that's, I mean,
22 the requirements were in the Title 24 Codes that HERS
23 testing was required, so that means the building
24 departments or the building inspectors aren't even looking
25 at that stuff. They're not asking for it. Well, if

1 they're not going to ask for it, no one is going to pay
2 money to do it.

3 MR. STONE: This is another situation where I
4 think, you know, if you have a solution I'd love to hear
5 what your solution is. I mean, we all agree that there's a
6 problem there. But part of the reason for having that
7 requirement in the Code goes back to when we started the
8 Savings by Design Program and design teams were
9 incentivized to all get together upfront instead of kind of
10 doing their piece and throwing it over, and making sure
11 that you had experts involved in the process that
12 understood how it was going.

13 Now, I understand what you're saying, is
14 functionally it's not working that way, and I don't think
15 you're going to find a lot of disagreement, but knowing
16 that what the intent is, do you have a recommended
17 solution?

18 MR. SPLITT: Well, one was to also require that
19 they have a CEA. The other is the program you're talking
20 about, when the utilities were involved, I sat in on some
21 of those projects, so we sat around, but there was a
22 utility representative there sitting at this meeting, too,
23 checking off things to make sure that they actually did the
24 things they were supposed to do at that meeting. So there
25 was somebody there looking over their shoulder, which isn't

1 happening now. That's the difference between then and now.

2 Okay, we're almost done. Section 130.2(b). It's
3 requirements for outdoor lighting that sort of got leftover
4 from the old Code, and I actually had a lot to do with
5 getting the outdoor lighting completely rewritten in the
6 Green Code to where it uses BUG Ratings. And BUG Ratings
7 are available for every fixture, they're listed in the data
8 sheets for the fixtures, it's very easy to figure out what
9 the BUG Rating is, which is backlight, up light, and glare
10 number that gives you an indication of how, well, it
11 doesn't like the dark sky.

12 The Energy Code still has some requirements for
13 really obscure calculations and numbers you have to
14 actually look up from data that you get from IES files that
15 almost nobody can get. There's just a lot of complicated
16 things that had nothing to reducing night sky glare, so
17 those should all just be thrown out. The only thing that I
18 would say that wasn't covered in what I did in the Building
19 Standards Commission for the night sky BUG Ratings is, when
20 we were doing this it was only for new installations, so
21 there is a question of what to do for an alteration.

22 So there may be some, if we want to, we can sit
23 down and figure out how to do that, but that wasn't
24 considered when I originally did all this stuff, it was
25 just a brand new parking lot, not what you do if it's an

1 alteration. So it was different if you had a pole in the
2 middle of the parking lot, or a little bit outside of the
3 parking lot, how does that affect things? So there are
4 some things that need to be addressed probably in the
5 Energy Code. But referring to these other tables, and
6 looking up these obscure numbers, depending on what the
7 wattage of the fixtures, it doesn't really accomplish
8 anything.

9 MR. OLVERA: Pat, this is Chris Olvera from the
10 Energy Commission. So you're referring to this subsection
11 (b), the luminary cut-off requirements?

12 MR. SPLITT: Uh-huh.

13 MR. OLVERA: Okay, so I just want to clarify, so
14 that's only for lamps that are rated 150 watts or greater,
15 right? So if you install something that's more efficient,
16 they don't apply.

17 MR. SPLITT: Yeah, but if the idea was to prevent
18 dark sky pollution, what difference does the wattage make?
19 It's the light and where it's going, not the wattage of the
20 fixtures, which really isn't important.

21 MR. OLVERA: Yeah, I would agree. If you go
22 above and beyond, that's perfectly fine, but I just wanted
23 to make sure for this, it's only a requirement of the
24 Energy Standards if it's rated 150 watts or greater?

25 MR. SPLITT: Uh-huh.

1 MR. OLVERA: But I agree with you, the nighttime
2 pollution, that should be a concern for everybody.

3 MR. SPLITT: So it's just to try to coordinate
4 and get the CALGreen requirements and the Energy Code
5 requirements to be the same because you're shooting for the
6 same goal.

7 Next to the last has to do with mini split heat
8 pumps. And also what would be these other systems we've
9 been talking about, VRF systems, ground source heat pumps,
10 air to water heat pumps, what you're considering newer
11 mechanical equipment.

12 But a lot of this newer mechanical equipment has
13 been around for 20 years, so it's not that new, it maybe
14 wasn't modeled very well before, but I was under the
15 impression one of the reasons we were going with the new
16 software was because this new software was supposed to be
17 able to model this stuff better, but it's not modeling at
18 all right now, so I was expecting that it would just be
19 modeled.

20 MR. SHIRAKH: So we talked about this a little
21 bit this morning. I have this ongoing project with the
22 manufacturers, IOUs, we have a plan they made yesterday, or
23 the day before, and so basically we're working through this
24 issue, manufacturers are on board, they're helping us, so
25 once we have the information we want, then we'll plug it

1 into CBECC-RES.

2 MR. SPLITT: Yeah, I'd like to suggest at least
3 for now for this mini-splits, if you could remove the
4 requirement that you model ducts in the attic? Because
5 there are no ducts. And I work on hydronic systems and
6 sometimes they just have a radiant floor system and we
7 don't have any cooling system, so I say I've got ducts in
8 the attic because there is no distribution system.

9 But for a mini split, the distribution system is
10 there, you know it's not ducts in the attic, so even though
11 you're going to make them model minimum efficiency, don't
12 throw ducts in the attic on top of that because that's I
13 just think punitive and there's no reason for it, and it's
14 something that would never happen -- ever.

15 MR. SHIRAKH: But actually I think they do make
16 them with duct.

17 MR. SPLITT: Right, but if they're doing that, it
18 would be for both heating and cooling, you'd already have
19 the ducts modeled. The ducts would be in there because it
20 would be in the heating site, too. I'm just talking about
21 the case sets hanging on the wall.

22 MR. FERRIS: Well, there are actually now
23 cassettes that have knock-outs for decks, so there are
24 mini-splits that have decks and the Title 24 Consultant
25 wouldn't know that, it would be -- so you have to assume -

1 MR. SPLITT: Yeah, it's the same as wall furnaces
2 have knock-outs for ducts, you don't do anything for those.
3 You know? Fair is fair. So it's just fair. And in my
4 mind, since I work on hydronic, I see a lot of problems
5 that you don't seem to be very aware of what's going on
6 with hydronic systems in general, and how they work, and
7 that they have pumps, pumps use energy. It might be nice.

8 We're now coming out with much more efficient
9 circulators that are variable frequency drives, and they
10 have smarts and they can control their speed depending on
11 what the pressure drops are.

12 But since you don't model pumps, there's no way
13 for anyone to get credit for putting in a better pump. So
14 they cost more money, so there's no incentive. If that's
15 your deal is trying to push people to use more efficient
16 equipment, you can't give people incentive to put in
17 something better if you don't model what they're doing at
18 all anyway.

19 MR. SHIRAKH: So again, we intend to give it full
20 credit once we have all the data and we have to basically
21 go through this process, it'll be a few months.

22 MR. SPLITT: So another suggestion, then, for all
23 this equipment that they're just sort of saying is new, and
24 you make it really hard for people to get it in the State
25 initially, I think you should come up with some sort of

1 exception where there's some special way they can install
2 this stuff if the manufacturer says, okay, we don't have
3 all the numbers you want, but if you let us install it,
4 we'll take a certain percentage of these things and you
5 pick the buildings you want and we'll instrument them for
6 you so you can collect data.

7 MR. SANGUINETTI: I've been installing grounds
8 for heat pumps every day, I have the workarounds and it
9 gets done. I'm not sure where the problem is.

10 MR. SHIRAKH: So we don't disallow either ground
11 sourcing pump or mini-splits --

12 MR. SANGUINETTI: You don't prevent them.

13 MR. SHIRAKH: -- so they may not get the full
14 credit that they think they deserve --

15 MR. SANGUINETTI: That's all we're asking for.

16 MR. SPLITT: Right, right, they want data, so I'm
17 saying, well, we'd have to instrument.

18 MR. SANGUINETTI: They just put them in. I have
19 a day here, May 13th, I'm going to go sit down with Todd.

20 MR. SPLITT: Okay. So we need some data because
21 these are more expensive systems and they've been sold to
22 these homeowners that want super-efficient homes, you know,
23 this is the greatest thing since sliced bread, and then
24 they get modeled in their Title 24 as minimum efficiencies,
25 you know, put a wall furnace in, what the hell?

1 MR. SHIRAKH: I'm agreeing with you, Pat, we just
2 have to go through this process working with manufacturers,
3 same thing with the ground source heat pump people.

4 MR. STRAIT: The best way to put it is we've been
5 burned before by taking on faith that some numbers that
6 have been provided to us are going to be what the actual
7 energy use of the equipment once installed. I'm not saying
8 anyone in particular, but therefore what we now say is we
9 have a data driven process where, once we have enough data
10 to in our opinion accurately model how it's going to
11 perform in different climate zones, different
12 circumstances, then we will feed all of that into our
13 software so it can actually model the system.

14 MR. SHIRAKH: Because, you know, if we don't
15 verify that and somebody else --

16 MR. SPLITT: No, but that's what I'm saying, you
17 should give them an incentive if somebody is trying to come
18 up with something new, you're not going to have them in all
19 your climate zones, they're not in any climate zone, so you
20 have to let them install a certain number of them as long
21 as they say we'll instrument them for you and collect data
22 for you, so then you have data, and it's a tradeoff, you
23 let them put some stuff when you're maybe not sure about
24 them --

25 MR. SHIRAKH: And they have been selling it --

1 MR. SPLITT: But I'm talking about any system,
2 not just ground source heat pumps, the new stuff coming in,
3 there's, you know --

4 MR. SHIRAKH: Okay, agreed.

5 MR. SPLITT: Air water heat pumps where the
6 refrigerant is CO2, you know, they're going to be here in
7 about a year. And they're going to be knocking on your
8 door saying, "What do we do with these? How can we get
9 them in?" So you should say, "Here, we've got a deal for
10 you. We'll let you put in a couple in each climate zone
11 and just instrument them for us."

12 So the last one had to do with Live-Work Spaces
13 and basically there's a lot of games played with Live-Work
14 Spaces. We have a lot of them in Santa Cruz, have them in
15 Berkeley, San Francisco, and they're spaces that big
16 buildings maybe have, you know, half a dozen units, and
17 that can be where someone is going to do whatever they do
18 and live there, also. So they're set up sort of flexibly,
19 open plan, and then the owner just decides what they're
20 going to do, if they're an artist, this is going to be my
21 studio, this is going to be my kid's bedroom, this is an
22 office, but when you go for compliance, a lot of time there
23 is no tenant yet, so you have to make a decision and the
24 problem now is it's been decided to acknowledge them as
25 residential units, except for the commercial lighting. The

1 commercial lighting has to meet the commercial lighting
2 requirements.

3 Well, what's commercial lighting? You model your
4 light systems that you think are commercial and were a
5 little over, well, actually that was a residential light
6 there, I made a mistake. You know, it's just a game that
7 people play. It will always work because they always just
8 convert commercial lighting into residential lighting until
9 it passes.

10 So my proposal was that instead of saying it's a
11 residential building except for the lighting, put another
12 case in for the nonres called "Live-Work Spaces." And
13 actually build the schedules for them so this is a space
14 that's used 24/7, and model the equipment.

15 So you're modeling, that's why you didn't want to
16 do it before, and say, well, we're using them as
17 residential because it's used all the time. Well, just
18 make a Live-Work Space system in the nonres and then do all
19 the lighting nonres. You know? Nobody is playing any
20 games anymore. Just everybody plays by the same rules.

21 That was it. Enough for this time unless there
22 are questions. Everybody wants to go home.

23 MR. STRAIT: I can at least thank you for your
24 comment, for adding more detail than originally submitted,
25 so I think this is going to be useful.

1 MR. SPLITT: Well, I was going to add more
2 comment at the hearing, I somehow didn't get to it.

3 MR. MACDONALD: Thank you, Pat. Are there
4 additional comments in the room? George, I see you walking
5 forward.

6 MR. SPLITT: Last word, George.

7 MR. NESBITT: George Nesbitt. So I guess the
8 question is where do we go from here? I have a couple
9 thoughts. Something that would be really helpful, I don't
10 know if a marked-up version of the various Standards and
11 Manuals got issued between 15-day and final, and then when
12 Errata come out, it would be better to go back and reissue
13 the various documents corrected and it would be good to be
14 able to track those.

15 A lot of this comes down to interpretation, your
16 interpretation, how we read it, you know, a lot of this is
17 happening one-on-one, so the question is, when issues
18 arise, when there's questions, and there's answers, how to
19 get them out because obviously Blueprint, whatever we're
20 doing, is not quite working. Is it the residential manual
21 and the nonres manual? You know, what sort of forums
22 should we have so that we can understand what the Code
23 says, especially when it's different than what we might
24 read it? DOE, I think, just came out with essentially a
25 Building Performance Wiki, I haven't really looked at it,

1 but where they've created and brought in a lot of
2 information and put it there, and different people you can
3 actually go in and edit it, add to it, it gets reviewed to
4 make sure it's right. But, you know, having somewhere to
5 go because two different days you get two different
6 answers, or you don't get answers, or you get an answer but
7 100,000 up, the rest of us don't get it. So how can we get
8 that information out?

9 A couple areas where I think we need work groups
10 would be around the whole issue of documents. CF1Rs, 2Rs,
11 3Rs, nonres Documents, Registry, sort of that whole
12 process. Another issue area would be software. What are
13 their capabilities? What's missing? What's not working?
14 What rules are not being implemented right? Or what
15 capabilities we don't have. In fact, I think EnergyPro is
16 allowing credit for solar hot water space heating again
17 last time I checked, which is not in the ACMS.

18 Those are two areas, I'm sure we can come up with
19 some others, but those are two big areas that sort of stand
20 out where we probably need some work groups and there's
21 stuff we can do for 2013, and of course going forward.

22 MS. MACDONALD: Thank you, George.

23 MR. BACHAND: May I speak, Rachel?

24 MS. MACDONALD: Yes, Mike. Go ahead.

25 MR. BACHAND: Mike Bachand, CalCERTS. There's

1 been a little bit of talk today about do we need a CF2R, do
2 we need a 1R, the forms this, the forms that, I want to
3 remind people that even in the Commissioners' workshop the
4 other day, he spoke about wanting to do serial number
5 tracking and other online permitting, he didn't say online
6 permitting, but we know that process is being worked on.

7 These forms are critical in some respects to
8 those processes, so before we flush the toilet on all that
9 stuff, I would hope for very careful consideration looking
10 forward in AB 758, the California Existing Buildings Action
11 Plan, and other processes on statewide permitting could use
12 some of these forms, information.

13 So I just want to throw that comment in between
14 one of Pat Splitt's comments and one of George Nesbitt's.
15 Yeah, and Nehemiah. Thank you.

16 MR. SHIRAKH: So I can see how we can streamline
17 and shortcut these forms, but, I don't know, I'm not
18 convinced. We can talk about that.

19 MR. THOMAS: Gene Thomas. A couple quick
20 clarifying questions. Mazi, just to clarify, is this the
21 proper forum, docket for coming up with a workaround, or
22 whatever else you would call it to bring the key changes in
23 the 2016 Code into practice before January 1, 2017?

24 MR. SHIRAKH: So we're here today to hear any
25 ideas and suggestions. I don't know if we can actually

1 commit to anything at this meeting today, right now.

2 MR. THOMAS: So you've given in our previous
3 conversations some idea of what something like that might
4 look like; it seemed like, Peter, you might have alluded to
5 something in terms of a workaround for the 2013 Code. What
6 do you see as the next step forward in coming up with that?

7 MR. STRAIT: Honestly, the next step forward is
8 to make sure that we're settled on the 2016 language. Once
9 we've got that - and I know Mazi has been doing a lot of
10 work with stakeholders to make sure there's a consensus
11 there; based on that, that will give us something to work
12 back from. Honestly, we'll take into consideration -- and,
13 yes, I'm looking at something that was passed from Legal --
14 we will take into consideration 2013 what we can because
15 we've noted this is a concern, this is an issue, this is a
16 request that's been made. We don't have anything that we
17 can promise at this time.

18 As far as this being the correct forum, I think
19 this is a general forum for implementation issues. This is
20 going into being a very specific discussion, so I think at
21 some point this is probably going to transfer into a more
22 targeted discussion that might be separate from what we
23 have in the current proceeding, but for right now this is
24 the best proceeding to interact with us through for this
25 2013 topic.

1 MR. THOMAS: Okay, yeah, and obviously the
2 language would have to be finalized so that would be the
3 15-day language would have to go all the way to adoption
4 before something could be worked on to put into place?

5 MR. SHIRAKH: Section 10-109 contains language, I
6 think it's called Alternative Component Method, which
7 basically says we can come up with an alternative component
8 that has the same or less energy consumption on kWh basis.
9 That's basically as to a hook we're trying to use.

10 What that's going to look like is open to
11 discussion, but essentially we have to look at the main
12 requirement for lighting operations and establish a budget
13 for it on a kWh basis, and then come up with an alternative
14 that has the same energy savings, but it may contain some
15 different requirements. So it could be lower LPEs in
16 exchange for control, something like that. So that's
17 basically the general outline of it, but we haven't really
18 worked out the details.

19 MR. THOMAS: So I'm also thinking in terms of
20 other people who want to provide comment for potential
21 solutions for now, that would be in this format?

22 MR. SHIRAKH: So as long as it meets staff
23 requirement to give the equivalency, you can come up with
24 other suggestions, but, you know, again, this is going to
25 be a public process where the data will be shared and

1 people will be commenting. So it is --

2 MR. THOMAS: Right, but for now that would be
3 under this docket?

4 MS. MACDONALD: Yes, that would be under this
5 docket for consideration for ongoing implementation of the
6 2013s.

7 MR. THOMAS: Great. Just making sure, okay.

8 MS. MACDONALD: Yes.

9 MR. THOMAS: Okay, thank you.

10 MS. MACDONALD: Thank you.

11 MR. SPLITT: I just wanted to comment since I
12 love this part of the Code, so what we're talking about is
13 an exceptional method, so you --

14 MR. SHIRAKH: It is not exceptional method, I
15 think if you look at it, exceptional method is for the
16 performance approach; this is 110-109, there is an
17 Alternative Component approach, I believe.

18 MR. PENNINGTON: Alternative Component Package.

19 MR. SHIRAH: Alternative Component Package. So
20 basically that's unlike Exceptional Method which is a
21 performance option, this is a prescriptive alternative.

22 MR. SPLITT: Right, but it's basically coming up
23 with another prescriptive method.

24 MR. SHIRAKH: Yes.

25 MR. SPLITT: So that might be more difficult than

1 just coming up with an exceptional method for a calculation
2 for like some new equipment or something, which is what you
3 like. The way that's supposed to work is that if somebody
4 does come up with an exceptional method in this Code cycle,
5 then for the next Code cycle, they don't have to do
6 anything, the Commission roles that into the Standards and
7 it's no longer an exception, it's normal.

8 MR. SHIRAKH: But either one, the premise is the
9 same.

10 MR. STEWART: Hi, uh, Brooklyn Stewart with Smart
11 Watt Energy. We're a turnkey contractor. We do a lot of
12 lighting work.

13 I just wanted to add to the comments that were
14 made by the various contractors, as well as the customers
15 or the representatives that have spoken. The language that
16 I saw in the 2016, the changes specifically to the lighting
17 -- and that's all I'm going to address is the lighting
18 portion of it -- tells me you guys have already looked at
19 it and seen that it's somewhat debilitating to our industry
20 now as the '13 changes were made.

21 And I just wanted to offer my perspective as it
22 definitely is something that has made the industry much
23 more difficult to operate and which means that we reduce
24 the number of projects that we do, we've had to move away
25 from the commercial sector more to public where they may

1 not have a three-year payback, it may be a five or a ten-
2 year, and so you can look at those things like advanced
3 controls, you know, utilizing your Lutron and Acuity and
4 other control systems.

5 But loosening the terminology specifically in the
6 retrofit where most of our customers look at re-lamping and
7 reballasting as a maintenance, you know, if I can take this
8 lamp out and put something else in there without changing
9 the configuration of the fixture, to be a 60,000-hour
10 fixture, why wouldn't I do that? That reduces my
11 maintenance cost and ultimately makes the business more
12 efficient.

13 So that really, I just wanted to throw our name
14 in there as we, again, see you guys have made the necessary
15 steps to say that maybe you've gone too far and scaled back
16 for the retrofit market. And if there's any way to
17 backslide, if that's what you're calling it, to backslide
18 that to as close to now as possible, there's a ton of
19 energy savings out there, a ton of projects, and many of
20 which we're having to look elsewhere and put those on the
21 back burner, so Title 24 is a little more accommodating.
22 Thank you.

23 MR. SPLITT: Just something popped in my mind
24 when he said that, is right now when we're changing the
25 Code to a new cycle, there is always municipalities that

1 want to get ahead of the curve and they want to adopt the
2 Code earlier, and you allow them to do that, right? They
3 can do that, they can adopt the Code earlier. Well, it
4 seems like that's a concept that you already have. If we
5 have a 2016 Code for lighting controls and people want to
6 adopt it early, it's the same thing, try to come up with a
7 path where they can do that.

8 MR. SHIRAKH: I know what Bill is going to say,
9 so I'll let him say it.

10 MR. PENNINGTON: The local governments are
11 allowed to adopt Standards that are more stringent than the
12 Standards that exist at the State level, so they have the
13 authority to adopt something more stringent than the 2013
14 Standards, but they don't have the authority to adopt
15 something that is less stringent.

16 MR. SPLITT: So you're sitting right there and
17 telling me that we're rowing back the standard, right, that
18 it's going to be less efficient in 2016 or 2013?

19 MR. PENNINGTON: The Energy Commission needs to
20 make this conclusion, well, to your comment, I guess.

21 MR. SHIRAKH: So the issue here is that if we
22 adopt the language, whether we're looking for the Code on a
23 per Building basis, or for statewide, so if you have a very
24 restrictive Code that would save more energy in a given
25 building like this, you have fewer projects; versus a Code

1 that has a little bit more relaxed control requirements,
2 but you get twice or three times as many buildings going
3 through it. Which one is more efficient?

4 MR. SPLITT: It just seems in my mind and the
5 minds of most people who hear that this was happening, if
6 you had said we're going to allow these people to adopt the
7 2016 Code earlier, they're all going to say, "Well, that's
8 good," and that's much to still think about it.

9 MR. SHIRKAH: Okay, thank you.

10 MR. JOUANEH: Just a clarification.

11 MR. SHIRAKH: Just a clarification.

12 MR. JOUANEH: So if you just change lamps, that
13 does not qualify as a retrofit, you have to change both,
14 you have to change lamps and ballasts, or the whole
15 fixture, just to be clear because a lot of folks --

16 MR. SHIRAKH: Yes, changing lamps by themselves
17 or changing ballasts by themselves don't constitute --

18 MR. JOUANEH: Or just the re-lamping or just
19 reballasting --

20 MR. SHIRAKH: So if you do both and you do more
21 than 40 of them, then you get into --

22 MR. JOUANEH: Right, I just wanted to make sure
23 that was clear.

24 MS. MACDONALD: All right, thank you. So let's
25 talk about next steps.

1 First I'd like to thank again everyone for being
2 here, everyone for calling in, thank the panel, Mazi
3 Shirakh, Chris Olvera, Peter Strait, and Todd Ferris, my
4 coworkers in the Standards Implementation Office and the
5 Buildings and Standards Office, I really appreciate you
6 sitting today and your interaction with our stakeholders --
7 and Bill Pennington, of course.

8 MR. PENNINGTON: Thank you.

9 MS. MACDONALD: So let's talk about Next Steps.
10 I don't have a specific slide because I wasn't really sure
11 of the outcome coming into this today, and I have to say
12 I'm really pleasantly surprised by the overall interaction
13 that I saw. I'd like to encourage everyone to get those
14 slides, they've been docketed, these slides here today. I
15 do have my contact information on there.

16 I'd like to probably move forward with -- of
17 course, subscribe to the Listservs. I know a lot of the
18 resources that we pointed to indicated the Listservs as far
19 as outreach and education and one of the ways that we
20 communicate with stakeholders.

21 But further, thinking aloud right now, I'd really
22 like to encourage individuals to contact me to perhaps
23 develop and explore the idea as staff works together of
24 maybe having some stakeholder working groups in the future,
25 for specific hot topics like the lighting issues, like the

1 geothermal heat pumps. We will have to take these things
2 into consideration right now and discuss them further, but
3 it's obvious from the amount of input we received today
4 these are really important issues.

5 As far as submitting comments to this Docket 15-
6 MISC-02, this is going to be open through the
7 implementation of the 2016s. I liked the comment earlier
8 today from a stakeholder about keeping this open past that
9 for individuals that were still working with the 2013s.
10 One thing we have to talk about, and we've been talking
11 about it internally amongst ourselves, staff and
12 management, is how yes we have this docketed. It is
13 public, everything on it posted is part of the record, and
14 we are reviewing the comments. But how do we communicate
15 with the public that we've seen your comments, we've
16 reviewed them, and what's the resulting action?

17 Well, we went through some of that earlier today
18 covering our resources and talking about the Blueprints and
19 ways of outreach, but something we are talking about -- and
20 I look at my Manager, Joan, as I'm saying this -- but
21 something we are talking about and you will be a part of
22 that discussion is how we close the loop of communication
23 with stakeholders. And we as staff do a better job of
24 doing that, of whether it's directly contacting you and
25 asking for clarification on your comments or pointing to,

1 "Hey, your comments were part of this outcome that we're
2 putting in this Blueprint next month, keep an eye out for
3 it coming out and make sure you're on this Listserv,
4 because it will be sent to this Listserv."

5 So better communication and outreach is
6 definitely high on our list of priorities.

7 And I again want to encourage always contact us,
8 contact the hotline, the hotline is our way of tracking
9 incoming calls and subjects, the individuals that work on
10 the hotline do a great job. Every time I walk by there,
11 they're just nose deep in the Manuals, and so I would
12 encourage everyone to contact the hotline with questions
13 that they have. They do vet those questions to staff, as
14 well. But more often than not, they do a really good job
15 of answering the questions right away.

16 Finally, comments to the Docket, again, there's
17 no deadline on filing comments, and they can be through the
18 eComment, or just this link, or you can submit them by hard
19 copy as well. And then do I have other -- the next slide?
20 Well, this slide has been up this whole time, but it's
21 talking about helpful hints for submitting comments, and
22 that points to a lot of what we were talking about today
23 getting into the specifics. If you have the 10-2(a)(J)(1)
24 and a specific part of the sentence that you're referring
25 to, and the suggestion as to how we could work around it,

1 or a clarification for it, or a change in a calculation,
2 those types of things are what we're looking for, as well
3 as any time of reasoning behind it is helpful.

4 So again, if you have any questions, I know we
5 talked earlier today about the kind of crossing from
6 dockets. There are a lot of individuals here that have
7 filed comments on the 2016s that have comments that are
8 relevant to this docket, and if you're on the phone or in
9 this room and you want any help with parsing out that
10 information, I encourage you to contact me and I'll gladly
11 help, just please use me as a resource. That is our part
12 of the Standards Implementation Offices, is to be available
13 and to help implement the Standards on an ongoing basis.
14 So with that, did you have another question, Pat?

15 MR. SPLITT: Well, you mentioned the Listserv.
16 Are you talking about a particular Listserv for this
17 docket?

18 MS. MACDONALD: Well, this Listserv, this docket,
19 thank you for mentioning that, this docket is under the
20 Buildings Listserv, Building Standards Listserv.

21 MR. SPLITT: Building Standards Listserv.

22 MS. MACDONALD: Yes, yes. But there's also0, if
23 you go to the Energy Commission Dockets for all of the
24 Divisions that we have, the Efficiency Division has
25 several, and I'd have to check and see, I'll have to check

1 and see what dockets. The Blueprint comes out under
2 Building Standards, or is it under Blueprint?

3 MR. OLVERA: So on the slides earlier, Pat, we
4 had three. So there's the Building Standards where if
5 there's anything else in relation to this, it will most
6 likely go out on Building Standards, but there's also
7 Efficiency and Blueprint, and so the slides that are
8 docketed that Rachel talked about on this docket online,
9 you can look at the slides, and those are the three that
10 are on there.

11 MR. SPLITT: So if something is going on with
12 this group, is there a particular -- would it be in
13 Building Standards? Or should we just always refer back to
14 the --

15 MR. STRAIT: It's going to be through the
16 Building Standards Listserv.

17 MS. MACDONALD: It would be Building Standards,
18 that's correct. That's what the workshop, and that leads
19 to another thing, any active or ongoing or future
20 activities that we have, this will all be a public
21 transparent process, we will be publicly noticing
22 activities. For example, if after consideration and
23 exploration, whatever we deem as the path necessary to take
24 for a subject, if we determine that we need another public
25 meeting to get down into the weeds to discuss it further,

1 that meeting will be publicly noticed, and that would go
2 out to the Building Standards Listserv.

3 MR. SPLITT: And so it's determined that this
4 group is sort of ongoing through to the next Code cycle,
5 that's probably something that might go out through the
6 Building Standards Listserv so we know it's not just this
7 one day, they give us another chance?

8 MS. MACDONALD: You mean like just a follow-on
9 announcement for --

10 MR. SPLITT: It sounded like, you know, prior to
11 this a lot of people would think we just had a meeting
12 today and it's over, but in fact that's not the case, they
13 can have input for a couple years.

14 MS. MACDONALD: Yes. So that sounds like we
15 might need to consider some type of eBlast, I'm turning now
16 looking at Chris, the Outreach and Education individual.

17 MR. OLVERA: Well, I would argue that, yeah, Pat,
18 if there's any subsequent action in relation to this, say
19 for example a workshop that I want to freak out Management
20 saying we're going to commit ourselves to that at this
21 point, but any other subsequent action, as Rachel was
22 stating, would be announced through the email Listserv and
23 posted on our website. But I think what you're saying to
24 the effect to just put comments on the Docket, we could
25 periodically email blast and just remind people, "Hey, the

1 Docket is available, if you have implementation issues,
2 please feel free," we could do that and I think that's a
3 good suggestion.

4 MS. MACDONALD: Yes, that type of just like a
5 general information thing, like, "Hey, this is a tool
6 that's available," or "this website is available," or
7 "we're accepting comments," or "this docket is available on
8 an ongoing basis, please feel free to comment, it's
9 available to the public." That is eBlast worthy type
10 material.

11 But what I was speaking to in regards to a public
12 notice would be is if we had another meeting, a staff
13 meeting, or a stakeholder meeting, or a subject specific --
14 because that is a public activity, that is a transparent
15 process and that would be publicly noticed.

16 MR. THOMAS: Could I suggest an email blast to
17 everybody who submitted comments under the 2016 Standards
18 and provided an email address? Because I think the vast
19 majority of them, many of whom are not in the Building
20 Standards Listserv would get notice of this docket and be
21 more likely to participate. Just a thought.

22 MS. MACDONALD: Yeah, I'd have to - I'll take
23 that as a follow-on action item, I'd have to check with
24 Dockets, I don't have access to who files comments, that's
25 why I keep reiterating "please contact me, contact me with

1 questions," because I do see the dockets, other than the
2 name and then me Googling the name like I did with Mr.
3 Martin -- is he still on the phone?

4 MR. THOMAS: Just look in the comment itself, you
5 know, they'll either have an email address and a name or
6 they won't, that's all I'm suggesting.

7 MS. MACDONALD: Okay, yeah, if there's email
8 address, I'll see if I can get a list of email addresses.
9 I think that's a good comment.

10 MR. THOMAS: Thanks.

11 MR. STRAIT: Thus far, anything we've sent out
12 really the 2016 we sent out through the Building Standards
13 Listserv, so if there are people that aren't yet on that
14 list, just tell them to get on that Buildings Listserv. I
15 don't think we can automatically sign up people based on
16 their email addresses that have commented if they haven't
17 requested that we add them to that Listserv, so although we
18 probably do have information --

19 MS. MACDONALD: We can't sign people up. People
20 just sign themselves up because they have to confirm their
21 subscription.

22 MR. THOMAS: Yeah, I mean I'll encourage people I
23 know to join that Listserv. I'm just thinking as an
24 informational email.

25 MS. MACDONALD: Yes, I think that's a good idea.

1 MR. STONE: Can I offer a quick fix to that?
2 Maybe you can send out an email to those folks and say
3 "it's been suggested that you join this Listserv."

4 MS. MACDONALD: Subscribe.

5 MR. STRAIT: Well, I think the question is just
6 who else would we include in that because we want to get it
7 to them as soon as possible and get that message out.

8 MR. STONE: What Gene was suggesting was people
9 who had commented and gave their email addresses.

10 MR. STRAIT: Right.

11 MS. MACDONALD: I can't guarantee 100 percent
12 contact rate, but I will go through that docket and see if
13 there's contact information and send out, do some cutting
14 and pasting, and send out a "please subscribe to this
15 Listserv." Are there other comments? Am I missing
16 anything from my panel? Or my Manager?

17 MR. STRAIT: Is there anything else online where
18 they want to raise their hand?

19 MS. MACDONALD: Is there anyone on the phone?

20 MR. STRAIT: Okay.

21 MS. MACDONALD: Oh, and I would like to note that
22 this is recorded both on WebEx, and that recording should
23 be posted shortly, and we also have a transcript that will
24 be available because we have a Court Reporter here.

25 MR. STRAIT: And the slides.

1 MS. MACDONALD: And the slides are docketed. I
2 docketed the slides yesterday, so they're actually on the
3 docket.

4 MR. STRAIT: And just to manage expectations,
5 full transcripts usually take a couple weeks to develop, so
6 when we say we'll have them soon, we'll hope to have them
7 before this time next month.

8 MS. MACDONALD: All right, well, with that, I'll
9 go ahead and conclude and I again thank you for your
10 participation today.

11 (Whereupon, at 3:48 p.m., the workshop
12 was adjourned)

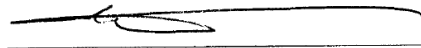
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REPORTER' S CERTIFICATE

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 11th day of May, 2015.



PETER PETTY
CER**D-493
Notary Public

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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.

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IN WITNESS WHEREOF, I have hereunto set my hand this 12th day of May, 2015.



Myra Severtson
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