STATE OF CALIFORNIA - THE RESOURCES AGENCY
BEFORE THE
CALIFORNIA ENERGY COMMISSION (CEC)

In the matter of,	)	
	)	Docket No. 12-BSTD-2
	)	
2013 Nonresidential Acceptance	)	
Testing Technician	)	
Certification	)	

Workshop on
2013 Building Efficiency Standards
Nonresidential Acceptance Testing Certification
45-Day Language Hearing

CALIFORNIA ENERGY COMMISSION
Hearing Room A
1516 Ninth Street
Sacramento, California

Monday, October 1, 2012
9:30 A.M.

Reported by:
Kent Odell

COMMISSIONERS

Karen Douglas

STAFF

Martha Brook, Mechanical Engineer
Joe Loyer, Mechanical Engineer

Also Present (* Via WebEx)

Tom Meyer
Steven Mesh
Christopher Ruch
Scott Wetch
Eddie Bernacchi
Richard Markuson
Chris Walker
Erik Emblem
Noah Horowitz
David Dias
Ron Yasny
John H. McHugh
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1 P R O C E E D I N G S

2 OCTOBER 1, 2012 9:36 A.M.

3 COMMISSIONER DOUGLAS: Thank you. So, welcome
4 everybody and I apologize for the late start. We don't
5 like to keep people waiting but earlier this morning I
6 was home with a sick child, planning to WebEx in and
7 have a leisurely morning and it turned out that I got an
8 e-mail from Commissioner McAllister, saying that his
9 flight was delayed due to engine maintenance. And he
10 wasn't sure how long the delay would last and so I
11 packed up the child and brought her in. She's upstairs.
12 I believe that he will be in. They did manage
13 to leave reasonably on time so, hopefully, his plane
14 will arrive around 10:00 a.m. and he'll be in shortly
15 thereafter.
16 But in any case it's good to get going and I'd
17 like to welcome you all here.
18 I'll have program staff introduce themselves in
19 just a moment.
20 We're here today to discuss and get comments on
21 the proposed Nonresidential Acceptance Testing
22 Certification Rulemaking.
23 These proposed regulations create an independent
24 third party certification and training program to ensure
25 that field technicians and their employers acquire a

minimal required level of training and skill to verify nonresidential lighting controls and mechanical systems, and verify that the comply with the Energy Efficiency Building Standards in Title 24.

The proposal's intended to improve the installation of mechanical and lighting systems in nonresidential buildings, therefore, saving energy over the long term.

We encourage and appreciate input from you and we appreciate the participation that you have already shown in this process and in the Title 24 rulemaking as a whole.

So with that, now, I'll turn this over to Martha Brook.

MS. BROOK: Okay, good morning. I'm Martha Brook. I'm a mechanical engineer here at the Energy Commission and I'm the project manager for this specific rulemaking.

Joe, do you want to introduce yourself, please?

MR. LOYER: I'm Joe Loyer, a mechanical engineer here at the Energy Commission.

MS. BROOK: Okay, so just a -- sorry, I don't know how to do this.

Okay, so just what we're going to do today is just review the calendar that we're under to make sure

everybody's on the same page in terms of our requirements to complete this rulemaking.

We're going to review the 45-day language that was posted and, hopefully, you've all looked at yourselves.

And then we're going to get to the heart of the hearing which is hearing from you, and those of you online, about your comments, and questions, or concerns about what you've seen in the 45-day language.

So, we're having the 45-day language hearing today. The end of the 45-day comment period is November 12th of this year. We're planning to release 15-day language no later than November 21st.

We hope to have a set of 15-day language that can be adopted on December 7th. And the Energy Commission will then include the language in this rulemaking with the 2013 Standards language for a complete package that gets approved at the California Building Standards Commission business meeting currently scheduled for January 7th, 2013.

Okay, so now I'm going to march through the 45-day language. And we're going to go through all of it. And it won't take very long, I'm guessing 10, 15 minutes, and then we'll open it up for comments.

So, the first section that we're including in

1 this new language, our new definitions in Section 10-102
2 for the three entities that we're regulating under this
3 set of language; so that includes the acceptance test
4 technician, who's a person who performs a nonresidential
5 acceptance test requirement, lighting controls
6 acceptance test technician who completes the lighting
7 controls acceptance test. The mechanical acceptance
8 test technician completes the mechanical acceptance
9 test. And both are certified by the certification
10 providers.
11 The employers of each of those are also entities
12 that are certified by certification providers. The
13 employer basically employs the technician and gets
14 trained and authorized to be an employer and overseer of
15 a technical for the Title 24 Part 6 acceptance test.
16 Similarly, for mechanical acceptance test
17 employer.
18 And then the certification provider is an
19 agency, organization or entity approved by the Energy
20 Commission to train and certify acceptance test
21 technicians and employers.
22 And those are segregated into lighting controls
23 acceptance certification providers and mechanical
24 acceptance test certification providers.
25 Then Section 10-103-A is the residential

lighting controls acceptance requirements. And those are followed by 10-103-B, the mechanical lighting -- the mechanical acceptance test requirements, which will go next.

So, the first section of 10-103-A is the scope, which basically says that these regulations regulate technicians, employers and certification providers for lighting controls acceptance tests.

Item B is the industry certification threshold. We have two items under this threshold. We've established the minimum number of certified acceptance test technicians, no less than 1,000.

And we've also established a threshold to make sure that there's adequate industry coverage by the certification providers.

So, this threshold is meant to ensure that technicians have reasonable access to training and certification, and that's electrical contractors, general electricians, professional engineers, controls contractors, and commissioning providers have opportunities to become certified technicians.

So, both 1 and 2 need to be met before these requirements, the requirements in Section 120.5 and 130.4, which we'll get to at the end, kick in.

And those requirements basically say that you

1 can't complete an acceptance test unless you're
2 certified.
3 So, that requirement for certification will only
4 kick in once both of these threshold criteria are met.
5 The next item under this section is
6 qualifications and approval of certification providers.
7 And this item is the meat of the regulations. It goes
8 through the requirements for certification providers to
9 document their organizational structure.
10 It has an explicit requirement that providers
11 must certify technician employers.
12 And then it spends quite a bit of time talking
13 about the training and certification procedures that
14 must be documented, including the scope of the training
15 and the test -- and the lighting controls technician
16 training, including a documentation on the curricula,
17 the prequalification criteria for technicians, the
18 instructor-to-trainee ratios of the training program,
19 the competency tests that are given to the technicians
20 and employers, and the procedures for re-certifying the
21 technicians and employers when Title 25, Part 6 is
22 updated.
23 There are also requirements to document the
24 employer training, the complaint procedures in terms of
25 providers work with building departments and officials

when a complaint for a technician has been filed.

And also to document the procedures that the certification provider uses to revoke certification of either a technician or an employer.

And then, also, the documentation of how the certification provider ensures quality assurance, independent oversight, and accountability of their program.

The next item is requirements for certification providers to provide annual reports. They provide annual reports to the Energy Commission.

And this is one mechanism that the Energy Commission will use to understand how the certification providers are completing the certification to technicians and employers, and meeting the requirements that we've set forth.

Item E is interim approval of the California Advanced Lighting Controls Training Program, CALCTP, as a certification provider. And this interim approval is conditioned upon the submittal of an application as required in 10-102-A(c). That was basically the big chunk of documentation that I just summarized. So, that must be completed and submitted to the Energy Commission.

CALCTP-certified technicians must successfully

1 complete a Title 24, Part 6 Lighting Controls Acceptance
2 Test training, as well as employers. So, if you're
3 already certified with CALCTP as either a technician or
4 an employer, you still need to get very specific
5 acceptance test training for the test listed in 130.4
6 before you're deemed to be certified under these
7 regulations.
8 And then, finally, the interim approval ends
9 July 1st, 2014 or six months after the effective date of
10 the 2013 standards.
11 This is basically just to mark an end date.
12 Otherwise, interim approval would last forever and there
13 kind of violate the term "interim".
14 So, I think I skipped ahead there. So, I did
15 that. I have lost my place here. There we go, okay.
16 Item F, certification provider application
17 review and determination; this basically just outlines
18 the procedures the Energy Commission will take to review
19 and approve applications from certification providers.
20 So, the Energy Commission staff will review and
21 determine the completeness of the application from the
22 certification provider.
23 Our Executive Director may request additional
24 information if needed to evaluate the application. And
25 the Executive Director shall also provide copies and

allow for public comments of our evaluation of the application.

And then the Executive Director will provide a written recommendation to the Energy Commission on whether the application should be approved or denied. And the Energy Commission shall make a final decision in a publicly-noticed hearing.

Finally, the review by the Energy Commission; this section just allows the Energy Commission to revoke the authorization of a certification provider if the Energy Commission determines either there has been a violation of these regulations or that a certification provider is no longer providing adequate certification services.

So, that's the extent of 10-103-A.

Next, we have 10-103-B, which is the same set of regulations for the mechanical acceptance test requirements. It covers the same scope in terms of mechanical technicians, employers and certification providers.

It also has the same industry certification threshold section. This section is different than the lighting control section because it has an either/or condition here. Either there's 1,000 technicians that are certified to complete all of the tests in 120.5 or

there's no less than 1,000 certified technicians that complete a subset of those tests.

And this is the subset, the same subset that you'll see later of tests that specific organizations have been granted interim approval to certify their technicians on.

So, these tests are basically the tests upon review of the curricula that we had access to and review of these tests. The subset here really focuses on the tests that we think technicians of the test and balance nature that we will be granting interim approval for are trained on in terms of the scope of the curricula that staff reviewed. It really kind of gets to mechanical systems that have -- that have control types that can be tested and successfully completed by technicians.

As opposed to more complicated and advanced control systems that really require a controls contractor to aid in the completion of the acceptance test.

So that the subset list of tests include the outdoor air ventilation system test, the constant volume single zone unitary air conditioner and heat pump test, the air economizer control test, demand control ventilation system test, the supply fan variable flow controls test, the hydronic system variable flow

1 controls test and the automatic demand shed controls
2 test.
3 This industry certification threshold Part B is
4 the same as the lighting controls. The idea here is
5 that we want industry coverage by the certification
6 providers before the certification requirements kick in.
7 So, again, technicians will have reasonable
8 access to training and certification, and professional
9 engineers, HVAC installers, mechanical contractors, TAB-
10 certified technicians, controls installation, and start-
11 up contractor, and commissioning professionals should
12 all have opportunities to become certified technicians.
13 The qualifications and approval of certification
14 providers, basically, the same set of criteria as in 10-
15 10-A; the certification provider must document its
16 organizational structure. They must be capable of
17 certifying employers. They must document their training
18 and certification procedures, including the scope of
19 their training.
20 The mechanical acceptance test technician
21 training, including curricula prequalification,
22 instructor-to-trainee ratios, competency test,
23 recertification procedures for updates to the standards,
24 the employer training, complaint procedures, revoking
25 certification procedures.

1 And Item F; quality assurance, independent
2 oversight and accountability measures.
3 Now, at this point I should make a note that
4 Energy Commission staff caught an error in 45-day
5 language.
6 We have, in the document posted online, an Item
7 4 that also talks about quality assurance, independent
8 oversight and accountability, and that was basically a
9 mistake in the 45-day language.
10 Item F replaces Item 4 and so in 15-day language
11 the Energy Commission will keep Item F and strike Item
12 4, which is why I don't list it here.
13 Item D; requirements for certification providers
14 to provide annual reports.
15 Item E; interim approval of AABC, and EBB, TABB
16 as certification providers conditioned upon the same
17 items.
18 The interim approval is only granted for the
19 subset of tests listed. Those are the same lists, the
20 same tests that I just listed.
21 And they also must submit an application as
22 required by 10-103-B(c). So, all of the documentation
23 requirements must be completed and submitted to the
24 Energy Commission.
25 Any technician that's already certified by AABC,

1 NEBB or TABB must successfully complete a specific Title
2 24, Part 6 mechanical acceptance test training regime.
3 And employers that are certified must also
4 complete a Title 24-specific training regime.
5 And again, interim approval ends July 1, 2014 or
6 six months after the effective date of the 2013
7 standards.
8 So, again, the same list of procedures that the
9 Energy Commission will follow upon application review
10 and determining whether or not a certification provider
11 application is sufficient.
12 The same set of requirements, I'm not going to
13 restate those.
14 And then the same review by the Energy
15 Commission, which gives the Energy Commission the
16 ability to revoke a certification provider authorization
17 if the regs have been violated or it's the Energy
18 Commission's opinion that the certification provider is
19 no longer providing adequate services.
20 So then, finally, the last two sections that
21 have been modified for the 2013 standards is there's an
22 Item B at the end of the nonresidential mechanical
23 system acceptance section, 120.5, and the same item
24 added to 130.4 -- I'm sorry, that header is screwed up.
25 That's obviously -- the 130.4 is the lighting controls

1 acceptance, not the mechanical system acceptance.

2 Anyway, the same general item is added,

3 basically requiring the acceptance tests in each of

4 these sections to be performed by certified technicians

5 employed by certified employers.

6 And that is the full review of the language and

7 we're open for comments, now.

8 And I think, Karen, if you wanted to manage the

9 blue cards, I don't know if you do or not, but I gave

10 them to David.

11 COMMISSIONER DOUGLAS: Good idea. So, I've got

12 a number of blue cards here. If people would like to

13 make comments, please fill out a blue card and bring it

14 Martha and she'll bring it up to me.

15 So, the first comment or the first blue card I

16 have is Tom Meyer.

17 MR. MEYER: If it's all the same to you, I'd

18 like to be last.

19 COMMISSIONER DOUGLAS: You're welcome to. So,

20 assuming you don't have competition for last, in which

21 case we'll flip a coin or something.

22 Steven Mesh.

23 MR. MESH: Hi, my name is Steve Mesh. For the

24 past 32 years I've been a lighting designer and

25 educator. I usually introduce myself as an ex-ego-

maniacal award winning New York City lighting designer.

And four years ago I actually moved here from the East Coast, to San Francisco, to become the lighting expert at PG&E's Pacific Energy Center.

One year ago I left PG&E to work independently and since then I've been working with PG&E, SCE, SMUD and other utilities and entities around the country to develop lighting education programs.

Immediately upon joining the PEC, I was asked to join a small group of experts in developing the curriculum for the CALCTP course. I also taught three of the original trainer sessions.

These sessions were taught at JATCs in L.A. and Sacramento. The last trainer session that I taught, which was actually at the West Sacramento JATC, was targeted at trainers who were also instructors at community colleges.

Due mostly to the foresight of Doug Avery, at SEC, as well as Bernie Kotlier, consultant to MECA IBEW, and with the full support of many of the California utilities, as well as the CEC, this great program quickly took shape.

To date, to my knowledge, approximately 2,000 certificated California electricians have taken and successfully passed the CALCTP course. That has given

1 those electricians a very solid foundation in, and
2 exposure to, the world of complex lighting controls.
3 And that means anything more than just a simple on/off
4 wall switch.
5 At this point the CALCTP content for the actual
6 certificated electricians is a 50-hour course consisting
7 of a series of half-day modules. Each module addresses
8 a different category of control device; for example,
9 occupancy sensors, photo sensors, low voltage relays, et
10 cetera.
11 During each module a short lecture is followed
12 by hands-on work where every single student must
13 successfully wire, condition and program every single
14 device.
15 At the end of the 50-hour program, students must
16 also pass a written test with a score of 70 or above.
17 There is a substantial amount of rigor regarding
18 the administrative and recordkeeping aspect of the
19 CALCTP program. To my knowledge, it's the first of the
20 kind in the country and probably in the world.
21 As such, it certainly makes sense to reference
22 CALCTP in upcoming code language concerning acceptance
23 testing, which is the subject of today's hearing.
24 To my knowledge, there is not yet any
25 competitive educational course that comes anywhere close

to offering the breadth of detailed information on these control devices and strategies, especially with such a large hands-on component incorporated into the course work.

Having said that, some experts, including myself, as well as Rick Miller, are concerned that proposed upcoming changes to Title 24, with regard to lighting control, will require even a much greater level of knowledge than students typically gain by going through the existing CALCTP course.

For example, there is very little in the CALCTP course that addresses actual systems. A half-a-day module which, as it is, incorporates at least one hour of academic lecture is not nearly enough time to educate students about the complexity of today's lighting control systems that are currently available in the market.

As Title 24 changes over time and increasingly reflects the potential energy savings by using lighting control systems available in the market, there will be a much greater need for educational offerings to deal with these systems.

Both Rick Miller and I have been contracted to develop such courses in lighting control systems for California utilities.

This year, thanks to the foresight of Connie Samla, Dave Bisbee, Paul Gillaspy, Dan Hamilton and Alan Suleiman, at SMUD, I was asked to develop a two-day course specifically for lighting control systems.

It was an enormously complicated job to develop this as a hands-on class. However, attendees were extremely energized by the exposure to these systems. They discovered many interesting features of the systems as a result of actually wiring them up. And they were also surprised by certain aspects of the systems that typical sales collateral doesn't address.

Big surprise, huh?

Ultimately, most of the attendees were very excited that within two days' time they went from having no prior knowledge of systems at all to having wired and successfully commissioned and programmed fairly complex digital lighting control systems.

Some of these attendees had never actually wired up anything in their entire lives.

In this course we only had time to teach and then wire up and program three systems, one wired and two wireless.

There are many more systems on the market today and some use strategies that we weren't able to cover in this two-day class.

1 And a good example of that is carrier current
2 technology. This is important because a system using
3 carrier current is possibly a good candidate for use in
4 a retrofit project.
5 So, therefore, it would be important to cover
6 that, as well as other technologies, in an advanced
7 version of the CALCTP course.
8 The concern that some of us experts have is that
9 the pace of development of these very robust educational
10 programs is not quite keeping pace with the changes in
11 proposed code language and requirements.
12 CALCTP is a great start to addressing this need,
13 but we essentially need a higher tier of educational
14 offerings to train both installing contractors, as well
15 as acceptance testers in this advanced technology.
16 If such advanced programs are not developed, how
17 can acceptance testers who have learned about older
18 lighting control technology, in programs like CALCTP, be
19 expected to fully understand and verify compliance with
20 the proposed new code language that is really based on
21 more complex control systems?
22 Personally, I would suggest that the CALCTP
23 program, and in parentheses, (and or other possible
24 competitive programs that might be developed) ultimately
25 contain at least three tiers of coursework.

The foundation level, which is what the current program basically is; it's a very solid foundation in complexity of lighting controls other than systems.

The next tier would be advanced level course in systems. And a possible third might be a whole separate tier just addressing commissioning, by itself.

So, this multi-tiered approach to educating both installing contractors, as well as code officials and acceptance testers, would address the complex needs of this market, only some of which are being addressed right now by the CALCTP offering.

And lastly, the CALCTP course is currently, to my knowledge, only offered to certificated California electrical contractors.

So to meet the needs of the State, as suggested in today's language, these programs need to be offered to other groups such as engineers, and code officials, and so forth.

So, having said that, I will just mention that Rick Miller is not here today and I'm not --

COMMISSIONER DOUGLAS: Can I ask you -- I don't want to interrupt, but I do want -- we try to keep comments to three minutes --

MR. MESH: That's fine.

COMMISSIONER DOUGLAS: -- and you've gone about

1 double that.

2 MR. MESH: No problem, thanks.

3 COMMISSIONER DOUGLAS: So, it would be great if

4 you could just make sure that we hear -- I don't want to

5 cut you off, go ahead and finish but --

6 MR. MESH: Oh, just very simple. Rick Miller is

7 actually on vacation, he's not here today, but I've read

8 comments that I think he sent to Martha, which are very

9 detailed about a lot of specifics in the proposed code

10 language and I'm certainly happy to discuss that

11 offline. Thanks.

12 COMMISSIONER DOUGLAS: Perfect, thank you.

13 That's exactly right and there's no need to read letters

14 into the record because, of course, we have them.

15 So, let me go on, now, to Christopher Ruch,

16 Final Air Balance.

17 Hello, my name is Christopher Ruch. I'm with

18 Final Air Balance, I'm the Operations Manager for Final

19 Air Balance.

20 I appreciate the opportunity to speak here and

21 I'm definitely pleased to see what the CEC is doing with

22 this. Following the forms throughout the years, I've

23 been very disappointed to see the intent of the forms

24 many times not being met out in the actual field. This

25 was for various reasons, which have been thoroughly

1 discussed in the past.

2 But I'm very pleased to see the ongoing effort

3 by the CEC to address this and I feel that we're really

4 making some progress with what's being shown here.

5 The two concepts that I want to talk about, as a

6 technician myself, and also a contractor, would be one

7 for the certification providers.

8 There was a significant amount of resources to

9 develop -- specifically for the mechanicals, what I know

10 about, is there was a significant amount of resources

11 that went into to develop NEBB, AABC and TABB. And

12 there would also be a significant amount of resources

13 spent trying to really get a specific Title 24 training

14 to go on.

15 And it would just be that I'd really ask that

16 there be some protection in there to make sure that

17 those organizations, ones initially given approval, but

18 also future organizations know that if, hey, they put

19 all this time into it someone isn't going to come in

20 behind them with a program that doesn't have the same

21 resources, and doesn't meet the same bar and suddenly

22 all their techs, who have put all this time into it, it

23 doesn't mean anything to them. So, that would be one

24 thing.

25 And right now I see the protections in there, in

1 the writing, it's just in how it's actually implemented
2 it would be good to have some -- you know, make sure
3 that these organizations know if you put in the time,
4 your technicians put in the time in class, spend the
5 resources, you know, you will be protected with a high
6 bar.
7 The other thing I was just going to address was
8 the basis for the 1,000. The initial statement of
9 review, Section 10-103-B, section (b), brought it down
10 to 1,000 techs was based off an estimated 20,000 jobs,
11 which would come out to about 20 systems per year.
12 So, for one of my technicians that would be
13 anywhere between one to three days, maybe, on average,
14 of course it depends on the job, per position. So, you
15 could be saying 20 to 60 days.
16 The only problem I would see with that is that
17 when you look at the economic impact statement and
18 you're saying that a business would spent about $500 and
19 a technician would spent about $2,000, is making it
20 worth their while initially.
21 Basically, is there enough work out there that a
22 technician's going to go out of the way, spend $2,000 to
23 get certified, go through all this extra stuff and maybe
24 it's going to get him 20 extra days of work, maybe.
25 And so what I'd really ask to do would be more

1 to develop an algorithm based off of current market
2 conditions, and projected enforcement, but also actual
3 enforcement, and kind of develop a number that's based
4 off of that of what's really happening, and what the
5 needs is out there.
6 Right now I just feel that the number might be a
7 little too high for me to convince a technician to go
8 for it. That's all.
9 COMMISSIONER DOUGLAS: Thank you.
10 MR. RUCH: Thank you very much, I appreciate all
11 of your time and all of your work.
12 COMMISSIONER DOUGLAS: Thanks for being here.
13 Scott Wetch.
14 MR. WETCH: Madam Chair, Scott Wetch on behalf
15 of the 25,000 members of the Western States Council of
16 Sheet Metal Workers, the 30,000 members of the United
17 Association of Plumbers, Pipefitters and Sprinkler
18 Fitters, and the California State Pipe Treads, and the
19 75,000 members of the State Association of Electrical
20 Workers, and the 30,000 members of the California
21 Coalition of Utility Employees.
22 First off, I'd like to thank the staff, and
23 Commissioner McAllister, and you, Madam Chair, for all
24 the time, and effort and thought that has gone into
25 where we are today.

1 I think it's helpful to remind the Commission
2 why we're here and how we've gotten here. You know, I
3 think the Commission came to the appropriate
4 determination, early on, that Title 24 is only as
5 efficient and effective as the enforcement.
6 And when you're talking about the enforcement of
7 the implementation of Title 24 it comes down to the
8 acceptance testing process.
9 And so I think that while today's proposed
10 language, we would certainly like to see it a little
11 more stiff and stringent in certain areas, we think at
12 the end of the day that it strikes an appropriate
13 balance, that it establishes minimum standards that will
14 over time grow and be developed by staff. And there's a
15 process that has been put forth that we think is an
16 appropriate process to help refine these standards
17 especially as the industry adapts and grows.
18 We think that these minimum standards ensure
19 that you have protections for quality, and
20 accountability, and accessibility of everybody within
21 the industry.
22 Particularly, we think that the staff's work
23 relative to ensuring that there be pathways for all
24 professionals, some with advanced degrees, be required
25 of all of the entities that will be certified to provide

this training.

We think that it's phased in, in a responsible way. We think that the trigger is one that is responsible and will meet the needs of the industry.

We encourage any organization that currently isn't listed for pre-approval to step forward in the interim period and provide the information that the Commission needs. Hopefully, that number of organizations can be expanded without compromising, I think, the standards that the staff has focused on.

And then just lastly, on behalf of all the aforementioned organizations, I would offer these comments. That is, having been involved in the Building Code process and the Title 24 process for many, many years, and over many, many cycles I think there's one constant. And that one constant is that this Commission has never established meaningful standards without some resistance from those folks who have to comply with those standards.

It is the only way to move forward in regards to energy efficiency. We've seen that in regard to appliance standards, on LCD TVs, we've seen that in building codes. It hurts to change, people don't like to change, but at the end of the day it's the only way that you can move forward on what the objectives of this

Commission are.

So, with that we thank you for all your work. And we have other witnesses who will provide more technical testimony. Thank you.

COMMISSIONER DOUGLAS: Thank you.

Eddie Bernacchi.

MR. BERNACCHI: Good morning Commissioner Douglas, staff, thank you again for giving us the opportunity to come speak at what has been a long-time coming for this 45-day hearing.

My name is Eddie Bernacchi. I'm here on behalf of the National Electrical Contractors Association and the Mechanical Contractors Association of California, representing over 600 contractors within each trade.

I want to begin by thanking the Commission for working with our industry to develop what we believe are fair and balanced proposed regulations.

Specifically want to mention our support for the employer certification requirement within those proposed regs. We believe those go a long way into getting you and California closer to its goal of real energy efficiency within California nonresidential buildings.

And while we're still reviewing the overall package, I believe both MECA and MCA will be in strong support of the regulations, with the exception of

1 possibly a request that the third party review proposed
2 certification programs be strengthened so that you
3 ensure a high quality certification which then, thus,
4 will bring you high quality installations and get us
5 closer to those certification goals.
6 So, with that I just want to say thank you to
7 staff. We really do appreciate you reaching out to
8 industry, working with industry and discussing the issue
9 with us. And we look forward to moving these
10 regulations further in the future. Thank you.
11 COMMISSIONER DOUGLAS: Thank you, thanks for
12 being here.
13 Richard Markuson.
14 MR. MARKUSON: Good morning Commissioner and
15 Staff; Richard Markuson. I'm here representing the
16 Western Electrical Contractors Association and the
17 Plumbing, Heating and Cooling Contractors of California.
18 We, too, support the direction that these
19 regulations are moving. We think that you've struck an
20 admirable balance between improving the qualifications
21 for those doing acceptance testing, employers, and the
22 certification organizations, while at the same time
23 providing some -- lots of different alternatives for
24 technicians, employers, and organizations.
25 We, too, are looking at the third party

1 oversight requirement and the ISO certification. There
2 are other entities, such as NISAD and some others that
3 might be able to provide comparable third party
4 assurance. We'll be incorporating those into our
5 written comments, but we appreciate the efforts of your
6 staff to work this out and produce something that's
7 workable for the industry.
8 MS. BROOK: Well, let me just comment that that
9 ISO standard is -- when you look at Item F, it's listed
10 as a suggestion, but it's not required.
11 MR. MARKUSON: Right.
12 MS. BROOK: Okay.
13 COMMISSIONER DOUGLAS: Thank you. Thanks for
14 the clarification.
15 Chris Walker.
16 MR. WALKER: Madam Chair, Chris Walker on behalf
17 of the California Association of Sheet Metal, Air
18 Conditioning Contractors, representing the interests of
19 600 contractors statewide.
20 I'd like to start by saying thank you to
21 Commissioner McAllister, Madam Chair, as well as staff,
22 Martha Brooks, and others who have been working so hard
23 on this draft regulation and now we have 45-day
24 language.
25 It is much improved, from our perspective, and

1 we are here to support the regulation today. The fact
2 that it now allows for certification of all parties and
3 is very flexible meeting the needs of both contractors,
4 professional engineers, and others is a big step forward
5 in our book.
6 We have a few questions that we will resolve in
7 the coming days. One of the things that's a little bit
8 unclear is the phase-in schedule and the threshold of
9 1,000 technicians on the mechanical side, who have
10 interim approval to complete the seven tests.
11 Does that mean that the seven tests kicks in,
12 but all 15 don't, and how does that all shake out in
13 time?
14 The other thing is we want to make sure that the
15 employer certification requirement is reasonable. Our
16 guys don't exactly think that maybe taking a day off and
17 going to the Bay Area for a full day would be a good use
18 of their time. Perhaps there's another option that we
19 can look at, that would imbue the training we need, and
20 the awareness we need without taking the time away from
21 their work that would be required.
22 And, finally, we'd like to talk about the demand
23 side of the regulation. We're talking a lot about the
24 supply side, how do we beef up what we're giving to the
25 marketplace? What is the marketplace demand back?

1 And this regulation doesn't address that. We're
2 not expecting this regulation to address that, but we
3 look at efforts in the future to accompany this and put
4 this in context.
5 We really need our building officials to step up
6 and make sure they have the resources. They're
7 overwhelmed, as it is today, but we need to make sure
8 they have the resources and the ability to know what
9 they're looking at and the ability to say no when the
10 documentation doesn't meet the muster.
11 So, with that, again, we'd like to thank you and
12 we support the regulation, we'll provide written
13 comments in the days ahead.
14 COMMISSIONER DOUGLAS: Great, thank you.
15 MR. WALKER: Thank you.
16 COMMISSIONER DOUGLAS: And Martha, is there any
17 comment you'd like to make now on the question about the
18 phasing?
19 MS. BROOK: Well, I think it is a good question.
20 I don't think we're going to be able to get a lot
21 clearer in the regulatory language but, hopefully, we
22 can have complementary explanatory information in our
23 compliance manual.
24 But the intent is that -- and again this is,
25 just like you said, it all comes down to compliance and

enforcement. It will be more complicated for building officials to understand that only 7 of the 15 tests need to be done by certified technicians.

But that was the intent was that for those tests, the certification requirements could kick in sooner than if everybody had to be trained on all 15 of the tests. So that, again, it's going to be a little problematic, I think, from the enforcement perspective, but we're just going to have to work that out.

MR. WALKER: Thank you very much.

COMMISSIONER DOUGLAS: Thank you. Thanks for being here.

Eric Emblem.

MR. EMBLEM: Good morning Commissioner Douglas, staff. I just, too, would like to echo what's been said here today. I think you've done a great job and you've come a long way from the February workshop and the initial work on this.

I'd like to just kind of go back, you know, to the reason why all this is happening and I want to commend, you know, the goals and the objectives for the State of California in going to zero net energy and reducing carbon emissions.

Back when I came here in 2007, from Washington, it was identified through a lot of the BBs, the big bold

1 initiatives and the workshops that our problem was
2 compliance. Our problem was matching resources to need.
3 And in order to achieve the goals of energy
4 efficiency we needed to have good people do good work on
5 a consistent basis.
6 It was also identified that in order to move the
7 market that we would have to have better compliance.
8 And that's what this speaks to, this speaks to better
9 compliance.
10 It could be better, it could be stronger. But
11 I'll tell you, from a consensus perspective with what
12 you've done, with the amount of input you've had from
13 various stakeholder groups this is a tremendous work of
14 art, it really is, it's a work of art.
15 Moving forward we want to work with you to make
16 it better. I think that, you know, we can always
17 improve, but you've got to start somewhere and this is a
18 great start.
19 I think that we have an example that's been let
20 out in the first few weeks of professional football of
21 what happens when you don't put the professionals on the
22 field, and the missed calls.
23 And I think if you go back 15, 20 years in
24 energy efficiency in California, we've done a tremendous
25 job. But some of the work of the officials, who are

1 reading the calls, has missed the mark.

2 And I think this is going to do a great job of

3 augmenting those calls, working with the officials to

4 make sure the systems are installed as they're supposed

5 to be.

6 Again, thank you very much Martha, great work.

7 COMMISSIONER DOUGLAS: Thank you for your

8 comments. And, of course, we'll look forward to working

9 with you as well because this is going to be a process

10 of getting this round right, and then moving forward and

11 making this better.

12 So, let me now ask, I've gotten to Steven Mesh,

13 but is there anybody else who would like to make a

14 comment, because he's asked to be last and I've agreed

15 to accommodate that so long as nobody else wants to flip

16 a coin for last.

17 So, Noah, go ahead.

18 MR. HOROWITZ: I have a two-sided quarter. Good

19 morning, I'm Noah Horowitz with NRDC, the Natural

20 Resources Defense Council.

21 I'm here to talk about the one piece that seems

22 absent from the proceeding so far. There's been great

23 progress made and I think there's emerging consensus

24 that we do need more acceptance testing, and we need to

25 do it right, and there are a lot of balancing things

1 that need to be done here.

2 The one piece that seems to be absent is the

3 independence of the certifier. NRDC has commented

4 earlier on there are a couple of elements; I think we've

5 gotten all but one correct.

6 The person doing the testing should be qualified

7 to do the testing. The CEC would set the requirements

8 as to who is or isn't certified, or qualified to do the

9 testing. It should be open to all, not hard-wired to

10 labor, unions, or people who might have been doing it so

11 far.

12 But the one piece is the independence of the

13 person doing the testing. We believe the person doing

14 the testing should be a financially disinterested party.

15 It shouldn't be the installer, the manufacturer, the

16 designer of the system.

17 We see there's a potential conflict of interest

18 here. So we would like to see the party doing that

19 testing be independent and that's one element that

20 didn't seem to be in the July proceeding, and we hope

21 that can be added in here.

22 To the extent the Commission deems they still

23 want to go forward and allow the person who installed

24 the system to test their own equipment, we think there

25 needs to be some checking of the checker. So whether

1 it's one-out-of-seven sampling, or something like that,
2 that might be a way to strike the appropriate balanced
3 here. Thanks.
4 COMMISSIONER DOUGLAS: Thank you Noah, thanks
5 for being here.
6 David Dias.
7 MR. DIAS: Good morning Commission, I'm David
8 Dias. I represent the Sheet Metal Workers Local 104,
9 which is now 46 counties in California.
10 We're in favor of this, as like Erik Emblem and
11 the rest of have said. You guys have done a great job
12 and want to thank you.
13 Just a couple of comments, I wish it was like
14 maybe a little bit more stringent, but we can live with
15 that. I think you guys, like I said, have done a great
16 job with this. With the compliance and maybe some
17 enforcement, I guess that has to still be worked out.
18 I also am a -- I sit on the CSLB, Contractors
19 Licensing Board; I'm one of the Board members.
20 And I'm not speaking for them right now, but as
21 a board member I see a lot of stuff throughout
22 California that doesn't get enforced, and some
23 contractors that really do things that aren't up and up,
24 and I just wish that we make sure that doesn't happen
25 with this. I'm the Chair of the Enforcement Committee,

actually, so I see a lot of that and I just want to make sure that qualified people do this work, and that's the main thing.

So, that's about it, thank you.

COMMISSIONER DOUGLAS: Thank you. Well, please help us make this work and to make it better as it goes forward.

MR. DIAS: Okay, thank you.

COMMISSIONER DOUGLAS: Steven Mesh, assuming no other cards?

Okay, come on forward.

MS. BROOK: No, it's Tom, I think that wanted to be last.

COMMISSIONER DOUGLAS: Oh, it's Tom that wanted to be last? Sorry.

MR. MEYER: You did say that it was up for grabs and --

COMMISSIONER DOUGLAS: All right, I misplaced -- I see what I did, I put your card somewhere else.

MR. MEYER: Hopefully, that's not saying you're going to put my suggestions someplace else, either.

(Laughter)

MR. MEYER: Thank you for the opportunity to speak, particularly last.

The reason I wanted to go last is I wanted to

1 hear what everyone else had to say. And we basically
2 have the same thoughts. If you listened to us, we're
3 singing from the same choir.
4 I want to thank you for the efforts in this
5 necessary change. We believe it could be stronger but
6 the current language makes sense.
7 We believe the mechanical systems acceptance
8 test technicians must have appropriate KSAs. KSAs are
9 the knowledge, things that can be measured by a written
10 exam.
11 Skills, ability to do the hands-on part of the
12 craft; ability is the application of knowledge and
13 skills, this cannot be taught, it comes from experience.
14 So, we're very much in favor of starting off
15 with the core group that you've selected, AABC, NEBB and
16 TABB.
17 And I guess I should say that I'm the Director
18 of Technical Programs for NEBB, so I'm a little
19 prejudiced.
20 Nonresidential buildings; each have their own
21 character and idiosyncrasies, template training will not
22 make CEC goals.
23 My concerns are an organization may make
24 template training, issue certifications and release
25 under-qualified people into the field. They may become

1 confused, frustrated, and not be able to perform as
2 envisioned.
3 NEBB, TABB and AABC have members who have met
4 the KSAs. Additional and specific training regarding
5 California Title 24 is relatively simple. Beyond
6 certifying our members and firms, in NEBB's case we do
7 certify firms, to the requirements we back up their
8 competency with NEBB quality assurance programs.
9 So, if our contractors do not -- excuse me.
10 When our professionals and firms do not perform
11 according to requirements, NEBB backs it up, we make it
12 right. We have a fully developed and funded quality
13 assurance program.
14 Thank you again for your time.
15 COMMISSIONER DOUGLAS: Thank you, thanks for
16 being here.
17 So, I wanted to just -- let me just see.
18 MS. BROOK: We have people online.
19 MR. LOYER: Yeah, online there are two comments.
20 COMMISSIONER DOUGLAS: Oh, yes, let's go to the
21 WebEx, go ahead.
22 MR. LOYER: Jon McHugh.
23 MR. MC HUGH: Hi, can you hear me? Hello?
24 MR. LOYER: Yeah, yeah, yeah.
25 MR. MC HUGH: Okay. This is Jon McHugh and I'm

1 just speaking for myself, as a private citizen, I'm not
2 representing anyone.
3 In looking at the language here, I'm always
4 interested in trying to make sure that the regulations
5 are clear and streamlined. And it appears to me that
6 there is a lot of additional language in this proposal
7 that is perhaps not desired.
8 I think that the requirements should be focused
9 solely on what are the requirements in Title 24, how to
10 conduct the acceptance tests, and how to fill out the
11 acceptance test forms.
12 And there's, I'd say, a bunch of extraneous
13 language in what the current proposal has.
14 In addition, it appears to me that it really
15 isn't appropriate to pre-qualify different
16 organizations. That this language should just describe
17 what the requirements are of being qualified and that
18 the approval of the various organizations occurs
19 according to the -- according to the requirements in the
20 standard.
21 In addition, when we look at -- I'm very
22 supportive of CALCTP, but as Steve Mesh has noted, many
23 of these requirements are -- the code requirements are
24 complex and require not just, necessarily, an
25 electrician. It could actually be a controls

contractor, who isn't an electrician.

So, I wish that the Commission takes a look at that.

And in addition, when we look at lighting that -- certification by other groups, such as NELCO's CALT and CSLT, the Certified Apprentice Lighting Technician and Senior Lighting Technician be evaluated.

And then, finally, in terms of certification and de-certification that this is really something that should be a function of the California State Energy Commission or the Contractor's State Licensing Board. Thank you.

COMMISSIONER DOUGLAS: Thank you. Are there other comments on WebEx?

MR. LOYER: Mark Heideman.

COMMISSIONER DOUGLAS: Go ahead. And maybe you could turn the volume down just a little. I don't know if I was the only who --

MR. LOYER: Mark?

MR. HEIDEMAN: Okay, can you hear me?

MR. LOYER: Yes.

MR. HEIDEMAN: I have a very brief statement and that is under extremely difficult circumstances and with limited resources I think that the CEC has done a tremendous job at resolving this issue.

1 And I am delighted to hear parties from all
2 sides of the issue commending the CEC on this.
3 But in particular I just wanted to make sure
4 that everybody realizes the work and dedication of
5 Martha Brooks in bringing this to a conclusion.
6 And that's all I have to say. I'm very happy
7 with the result.
8 COMMISSIONER DOUGLAS: Thank you. Other WebEx
9 comments? It doesn't sound like it.
10 So, I'm stalling for just a moment to see if
11 Commissioner McAllister makes it, but I think he's
12 probably five minutes away. And I will not attempt to
13 ad lib closing comments for him.
14 But in any case, I really want to thank
15 everybody who's come here, joined us today, worked with
16 us on these regulations. This was an accelerated
17 rulemaking. It was a very intensive process.
18 I also want to thank the people, obviously, who
19 joined us on WebEx, who have worked with us on this.
20 Martha, you have done a tremendous job, with
21 very little time, and a lot else on your plate, so thank
22 you.
23 I really appreciate the support I hear in the
24 room and I also -- I also very much understand that this
25 is what we could do today that attempted to strike, and

1 I think did a good job of striking a balance in a number
2 of different areas.
3 And I heard some speakers say they wish they
4 could do a bit more, and I heard at least one speaker
5 say, well, you know, maybe we did a bit much in some
6 areas, not necessarily the technical ones.
7 I think that we have struck a workable balance.
8 I think that this is a program that can succeed and I
9 hear a lot of commitment to make it succeed, and I have
10 also seen a lot of interest in this.
11 So, we will definitely work with everybody to
12 continue building on the foundation that we've created
13 here and make the program better as we go forward.
14 So, thank you again, and we'll look forward to
15 your comments.
16 Go ahead, Martha.
17 MS. BROOK: Yes, I was just going to ask if you
18 could encourage everybody to get their comments in
19 quickly, that would be great.
20 COMMISSIONER DOUGLAS: So, what is the comment
21 deadline?
22 MS. BROOK: Well, the deadline is the 12th of
23 November, but if everybody waits until then, then we'll
24 have a really hard time meeting our deadline for 15-day
25 language.

COMMISSIONER DOUGLAS: So, you get extra points for submitting your comments well before November 12th, and a lot of them.

Of course, we'll look at comment submitted late in the day November 12th, as we always do, but we would really appreciate comments from you earlier than that.

With that, we'll look forward to your comments and thank you. We're adjourned.

MR. LOYER: Just real quickly, you've noticed that we are transcribing this. If you can, would you please leave your business cards with the person over here with the headphones?

(Thereupon, the Workshop was adjourned at 10:34 a.m.)

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