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CALIFORNIA EN	IERGY COMMISSION
STAFF	WORKSHOP
In the Matter of:	<pre>) Docket No. ) 13-ATTCP-01 ) ) ) Staff Workshop: Conditions</pre>
Acceptance and Training Certification	) for Requiring Certification ) for Acceptance Test _) Technicians

CALIFORNIA ENERGY COMMISSION

THE WARREN-ALQUIST STATE ENERGY BUILDING

FIRST FLOOR, ART ROSENFELD HEARING ROOM

(HEARING ROOM A)

1516 NINTH STREET

SACRAMENTO, CALIFORNIA

MONDAY, FEBRUARY 29, 2016

1:00 P.M.

Reported By: Kent Odell

## APPEARANCES

## Staff Present

Joe Loyer, Standards Implementation Office CEC Shawn Pittard, Public Adviser's Office CEC

<u>Public Discussion</u> (\* Via telephone and/or WebEx) Chris Walker, CAL SMACNA James Huber, NEBB Dave Dias, Sheet Metal Workers Local 104 Patrick Pico, Bay Area JATC Tom Meyer, ESCO Group Duane Davies, National Air Balance Company \*Finlay Drake, Drake Integrations, LLC \*Jerry Weiss, HVAC Excellence David Lawson, Lawson Mechanical Contractors Steve Smith, Pacific Test & Balance Amber Ryman, Northern California/Hawaii NEBB

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1 PROCEEDINGS 2 FEBRUARY 29, 2016 1:00 P.M. 3 Okay. So the clock says 1:00 MR. LOYER: 4 o'clock, so we'll go ahead and get going here. My name is 5 Joe Loyer, I'm from California Energy Commission, I'll be hosting this workshop. 6 7 This is a semiformal process. I'm going to start 8 off, I have a presentation. And during that presentation, 9 and mostly following that presentation, we'll throw the 10 floor open to questions and comments to be made. 11 I think the most important thing to recognize 12 here is we have people participating both here physically 13 at the Energy Commission and on WebEx. And by WebEx, if 14 you're participating, what I would like you to do is if you 15 have a question is to go to the chat window of your WebEx 16 and enter your question in there. If I take a look right 17 now at the list of participants, there are a few people who have signed in here or are in the process of signing in. 18 19 And I see Jerry has -- Jerry Weiss, you have your 20 hand raised. Right at this moment I can't actually help 21 Jerry, because there's no phone icon next to his name. So 22 Jerry's probably say call-in user number four. At some 23 point, Jerry, if you want to make a comment just go ahead 24 and type into the comment box and I'll be able to read your -- or into the chat box and I'll be able to read your 25

1 comment. And I'll come back to the chat box several times 2 during the presentation just to make sure that we're not 3 excluding anyone.

When we do get to comments what will happen here in the room is we will use this podium that is in the center of the room. So there's no hiding in the audience, so you have to come up, because it is the only microphone here that's available for anybody else to use. So come up to the microphone, state your name, and then your comment or your series of comments. It doesn't matter either way.

We do want you to have your name on the record, because we are -- not only are we recording this via WebEx, we have a stenographer here who is going to be taking notes the entire time. And for his assistance, we would like your name said on the record. We'd also like you, if you can, drop a business card off with him so he has the proper spelling of your name.

18 Let's see, I do have a few little things I have 19 to talk about since we're here physically in the room. So 20 let's see, for those of you not familiar with this building the closest restrooms are located straight across. 21 There 2.2 is a snacks bar on the second floor under the white awning. 23 Lastly, in the event of an emergency and the building is evacuated, please follow our employees to the 24 25 appropriate exits. We will convene at Roosevelt Park,

which is diagonally across the street from us, from this building. Please proceed calmly and quickly, following employees with whom you are meeting, to safely exit the building. That means everybody has to be behind me, so I go first.

6 So I think with that, just one or two more items. 7 We have Shawn Pittard here who is from the -- Shawn, what's 8 your office again?

9

10

MR. PITTARD: Public Adviser's Office.

MR. LOYER: Public Adviser's Office, thank you.

He is armed with blue cards and ready to assist anybody who is feeling like they need some help to participate. You can also contact Shawn's office after the workshop to see if you can get more involved with the process if you feel like you need to.

16 You can make comments here, verbally now. You can make comments in writing by going to our website that's 17 18 in the notice. And you can make comments via WebEx, either 19 via chat and I will read those in -- just one warning. I 20 will read those in as verbatim as decorum allows, so do 21 your best. Type clearly. But you have many ways of 2.2 participating and we will be happy to assist you in any 23 other way that you need to be.

24 Shawn, did you want to say anything?25 MR. PITTARD: No.

MR. LOYER: No, okay I think we're good to go.
 So five minutes, oh that's pretty good.

3 So this is a Consideration of the Industry 4 Certification Threshold for Mechanical Acceptance Test 5 Technicians Certification Provider Program. It's a 6 mouthful. It is one of the important -- one of probably 7 the most important things that we're doing with the ATTCP 8 program right now.

9 Lighting Controls ATTCP, they have already 10 surpassed their threshold. They are now required to be 11 certified. Mechanical ATTCPs have not, so they are not 12 required to be certified at this time. And this whole 13 workshop is to try and get to what are going to be the 14 issues if, and when, the Energy Commission does find that 15 we are ready to require that the mechanical technicians need to be certified. 16

So moving to this one, so participating by WebEx in person outline of the workshop is right here. So we're going to talk a little bit about what exactly acceptance testing is. Is it a certification for acceptance technicians? And then we're going to get right in to stakeholder concerns, open for discussions, and then move on to next steps.

24 So this actually can go very quickly here. And 25 we're just going to check real quick at the chat and see if

1 anybody has -- nope.

2	So the purpose of acceptance testing is pretty
3	straightforward. When you install mechanical systems into
4	new buildings or existing buildings, it's pretty typical
5	even without us requiring forms, for the technicians that
6	do the installing to actually check their work to make sure
7	the device actually does work. The requirement for the
8	Energy Commission and for the State, since 2005, has been
9	that you fill out the forms and you do that check
10	specifically as required by our regs.
11	So we have 16, 17, 18 tests, depending on which
12	one's you want to count, and yeah just if it wasn't
13	complicated enough, right? So with those tests, we want
14	them done pretty much the same way from one technician to
15	the next. And that's why we put together the procedures
16	the way we did.
17	So basically they come with a construction
18	inspection requirement, a functional test requirement and
19	then the reporting requirement. And it's really all of
20	them follow that basic format. And the intent again is to
21	make sure that the device you actually entered or you
22	installed actually operates the way it was meant to
23	operate.
24	Now, when it actually comes to the point of doing
25	the test, and when you're out in the field, very often you

1 don't end up with what was on the plans. The plans 2 changed before you get there and you have to make the 3 installation according to the new modifications. So 4 sometimes that can be a little difficult, a little 5 challenging.

And we've seen the lighting control technicians 6 7 walk out into the field with the NRCC Forms and the NRCI Forms, which are the Certificate of Compliance and 8 9 Certificate of Installation Forms for the general 10 contractor or the building owner to fill out. And in some 11 cases, they will help them fill them out, especially if 12 it's a smaller project. But this requirement has been around since the 2005 Building Energy Efficiency Code. 13

14 So the current problem, tests are not being 15 performed correctly, or in some cases at all. That's a big problem for the Energy Commission. We've had these around 16 17 since I've been harping on it, I guess a little, the 2005 18 Standards. And we haven't seen a huge amount of 19 compliance. That's very problematic for the State as a 20 whole. We need to get our Energy Efficiency Goals achieved 21 and these forms, these tests, is one of the ways that we 2.2 ensure that those goals are achieved.

23 So the certifications process, basically it 24 provides the education, training, and quality assurance for 25 the technicians and their employers. And that's where the

1 ATTCP really comes in. So this is all new requirements in 2 the 2013 standards. Prior to that we had discussed it a 3 bit, but we haven't really implemented it. So in our 4 particular situation we're talking about the 10-103-B in 5 Part 1, and in Part 6, Section 120.5.

6 So the threshold requirements, those are actually 7 laid out in the 10-103-B Section Part 1 of the Title 24. 8 There are two basic requirements. Now, when we say 9 threshold, this the threshold that must be crossed the 10 Energy Commission to find that it is now appropriate for 11 the mechanical acceptance technicians to actually be 12 certified, so to require certification.

13 First and foremost, there has to be 300 certified 14 mechanical acceptance test technicians. They have to be 15 statewide and there must be at least 300. Now, that number, 300. That number is not "the" number. We know 16 17 that right now, but we need to find the real cause and real 18 effects and real problems that we need to address to make 19 this decision happen. But we know that 300 isn't really 20 probably enough. But we need to figure out what the 21 problems are, so we can figure out how many technicians we 2.2 really do need, and where they need to be.

The second requirement is to access training for all qualified technicians from very specific professional groups. Now, right now in the room right here, we're look

1 at probably C-20 contractors. That's who we're mostly 2 talking about, HVAC contractors. But when it really comes 3 down to it a Certified ATT, a Certified Acceptance Test 4 Technician, can be the general contractor. They just have to get certified. They can be a commissioning agent. 5 Again, they just have to be certified. They can, in I 6 7 would say rare cases, be the building owner if they have the experience and ability. But it doesn't have to be the 8 9 contractor. But in the room right here, right now, and who will be affected first and foremost, is the HVAC 10 contractors from California. 11

But there are a lot of people that can actually be qualified to take the exams and if they have enough experience sit -- for the exams take and pass it, and be certified, and perform the acceptance tests. One of the other qualifying groups is professional engineers. And professional engineers are capable of taking this exam as well.

Now what's important about this particular requirement, when we look at the mechanical side of the equation here as opposed to the lighting controls, when NEMIC and NEBB are both certified acceptance test technician -- acceptance test technician certification providers, ATTCPs, they're both available now. When NEMIC was approved they were very staunchly

1 union-only. And because of that we could not get to the 2 point of actually providing training for all, because many 3 people do not belong to unions and will refuse to belong to 4 unions, but want to do this work.

5 There equally are many people who are both certified under union organizations and non-union 6 7 organizations for a variety of different reasons. Sometimes contractors, when you're bidding on a contract, 8 it may say, "You have to be NEBB certified." Or, "You 9 10 have to be a union-only job." So it depends on what the 11 job is. And so a lot of houses, a lot of C-20s are doing a 12 lot of -- are being qualified under union organizations and non-union organizations. 13

So in order to make all of that happen we had to have NEBB available. Now, it doesn't mean that this requirement is fulfilled, not yet. But it does mean that we are getting closer to the point of actually discussing when this certification can be approved.

19 So moving on to the stakeholders' concerns, I 20 think from the Energy Commission's point of view, this 21 first one is probably the most important. "The 22 implementation of the certification requirement may result 23 in undue disruption of nonresidential construction industry 24 due to the geographic distributions of ATTs." 25 So when we're talking about Los Angeles County,

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1 the center for basically most of the building in 2 California, we're not that worried that we're not going to 3 have enough technicians for L.A. What we are worried about is, "Are we going to have enough technicians for Alpine?" 4 5 Very little construction's going on in Alpine, but there is some. And they have to have access to these technicians. 6 7 So we can't pull the trigger if -- when L.A. is ready. We have to pull the trigger when every county in California is 8 9 ready.

So, "Local building departments need to be assured that only certified ATTs perform these tests." We have some issues with local jurisdictions being educated in a timely fashion, so that they know that when the trigger is pulled, and what to do when the trigger is pulled. So that education has to go on. And we have to settle on a way for that to actually happen.

17 "The general contractors need to be able to find 18 certified ATTs." So there has to be a way for the people 19 who actually need the work to be done, to find the 20 appropriate technicians.

I got the opportunity to do a presentation last Friday at the NEBB Annual Education. And I got some feedback of what some of the HVAC contractors are concerned about. So I'm happy to report a little bit about that, but they are also represented here. So, you know, don't let me

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1 put words in your mouth.

HVAC contractors, so time to complete the acceptance testing for each job -- that is a difficulty. When it comes down to it, a lot of these acceptance tests do take time. They do take technician time. That's just the reality of it. A lot of them can be done simultaneously.

Time to train and certify ATTs. The number of 8 9 available technicians to act as test-only or test-repair 10 technicians. This actually came up as a result of 11 something that happened with the lighting controls 12 technicians. And basically, it's not required that the certified technicians be third party. 13 In fact, the whole 14 intention of acceptance testing is for the installing 15 technician to actually perform the acceptance test themselves. 16

17 So that's the intent of acceptance testing 18 generally. And that's the intent here. But because not 19 every technician is going to be certified, at least 20 initially, then there's going to be a need for technicians 21 that will do test-only and test-repair. And it can be 2.2 difficult to find these particular technicians. That's 23 what the lighting controls was finding out, is that they 24 needed a separate list of technicians that were willing to 25 essentially go anywhere, do the tests that are required to

1 do, and either pass or fail the project.

2 The cost of submitting forms to the ATTPC -- that 3 was registered loud and clear at the Friday meeting. And I 4 think that's a big issue. When it comes down to it we have some ATTCPs, lighting control again, we have one of them is 5 not charging for forms. So the other one is charging, I 6 7 think the price they're charging is \$100. The Energy Commission does not set those prices. We do not see any of 8 9 that money. And we never want to see any of that money. 10 That's not our objective. The objective is for the program 11 to sustain itself, and for it to move forward in an 12 expeditious manner.

Acceptance Test Technician Certification Providers, as you might guess it actually takes a lot to be approved as an ATTCP. The applications we've seen are substantial. There are about three-to-six months worth of back-and-forth between the applicants and staff trying to make sure that the program lives up to the regulation requirements, and to the expectations as well.

So with this investment there is a need for the ATTCPs to get a return on their investment. So based on the expensive training, education, certifying and quality assurance -- quality assurance is of course the big ticket item ongoing. Quality assurance is a big deal for the Energy Commission. It's something we kind of harp on. We

don't want technicians simply to be certified and then to disappear into the wind and do whatever they're going to do. We want to know what they're going to do and we want there to be repercussions for them doing it wrong. And then that comes back to acceptance testing tracking.

6 There's also issues with industry support and 7 local jurisdiction enforcement. And, you know, the ATTCPs 8 are concerned with all of that. You don't get a program 9 like this moving forward without a few missteps. And so it 10 becomes critical in those situations where there are 11 missteps that you have general support from the industry 12 and you have general support from the local jurisdictions.

So some misconceptions: the ATT is not required to be third-party or independent of the installing contractor or the general contractor. They can all be part of the same group. This is not like HERS. HERS definitely is third-party independent. Now, ATT is not required to be third-party or independent. That doesn't mean they can't be third-party. They certainly can be.

Acceptance tests are intended to be performed by the installing technician. I think I've harped on that a lot, have I? Have I said that a lot? Okay. The Energy Commission is not an ATTCP. We regulate the providers.

And let's see here. So before I move on to this, let's just check the chat here. Okay. And nobody's

1 entered anything, and let me just make sure everything is 2 going okay with the participants. Okay. And I'm glad to 3 see that we have at least a few participants online.

So ideas for voluntary features from the ATTCP, one of these -- well, both of these, the lighting controls ATTCP is currently doing, providing a separate list of ATTs and ATEs that are willing to do test-only and test-repair. Lighting controls has actually implemented that and I think that's working out very well.

Tracking all acceptance tests, accepting field inputs, and providing completed forms with the ATTPC logo. The way that we have got the local jurisdictions on board with enforcement has been through this process where the ATTCP actually supplies the printed form of the test after its completed and the data has been entered and puts their logo on that form.

17 The reality is, is that in nonresidential we are still in a hardcopy world. So we have to provide those 18 19 forms hardcopy for the local jurisdictions. The local 20 jurisdictions are eager to have these logos, to see these 21 logos on these forms. Because it means that somebody else 2.2 is actually watching over these technicians. And they can 23 have a simple, easy way of verifying that that form has been filled out correctly. And that's what they really 24 25 want. They want a simple, easy way to complete their

1 inspection.

So available information to assist HVAC
contractors, I'm not sure how much information HVAC
contractors really need about acceptance testing.
Obviously you need to go through the training. That's the
best way to do it.

But the manuals we have, we have a Nonresidential 7 Compliance Manuals, it's Chapter 13. It lists out 8 9 everything that -- all steps that you need to take to go 10 through each acceptance test. And in that it has a lot of 11 different information, the purpose of intent, the 12 instrumentation that you might need, the test conditions 13 that you've got to set up, the estimated time to complete, 14 the acceptance criteria, potential issues, and indicates 15 what tests can be run concurrently as well. It's all in that in Chapter 13. It may be a little difficult to get 16 17 through. At least the first time it was for me. But all 18 the information is there.

So when we come up to solutions, when we try and look at this, the Energy Commission right now -- we are thinking that this is a county-by-county issue that needs to be addressed. We might be wrong. If we're wrong, we want to address it.

24 But from the information that I have available to 25 me, we went out and got information that includes the value

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of permitted nonresidential construction. And that is -it's from CURB, (phonetic) who put it together from the various building departments in California. Basically it looks at the value of construction for nonresidential that have been issued permits. So I mean we all know that there are issues with that right from the get-go. Not everything gets permitted.

8 So we look at that and say "All right, is there 9 anything better out there?" And so far I haven't found 10 anything. But you've got some ideas about what information 11 is available out there and how we might be able to get our 12 hands on it, we'd be very much interested in finding out.

13 With the number of licensed HVAC contractors, we 14 can get that based on where they say their business is 15 located, via their address. Now, we can put them into a 16 county that way. Now that's not to say that that 17 contractor only services that county, but for what we know 18 at this particular point, that is all we know: where they 19 are and what county they're in. And so we presume that they at least service that county. But we got that 20 21 information from CSLB. That's a state licensing board. 2.2 And obviously there is problems with that information. 23 But with these two pieces of information, what we

feel like we have is an idea of what the workload is and what the workforce is. And if we look at that on a county-

by-county basis it seems like there should be a way that we can use that information to get an idea of where the number of ATTs needs to be.

4 Now if we put that together with what acceptance 5 testing needs to be available for each climate zone and determine that -- okay, we can do that from the Energy 6 7 Commission based on our knowledge of the standards, our knowledge of the climate zones, and what we have connecting 8 9 climate zones to various counties -- we can put that 10 together. So that that is an estimate of not only what --11 how many technicians we need for each area, but what 12 acceptance tests they actually need to be able to perform.

13 So possible recommendations, so we might create a 14 minimum requirement of ATTs for each acceptance test for 15 each county. This would tend to address the issue of geographic availability of the ATTs and access to 16 17 infrequently-used acceptance tests. So even if we had a 18 thermal storage system that is only installed in certain 19 places within California, if there was a county that in an 20 unusual circumstance might develop a system that could be 21 installed in their county, they actually have to have 2.2 access to an ATT that can run that test.

23 So taking the local market constraints into 24 consideration we feel like this data might lead us to that 25 answer. Now, it's not definitive. So far there's no

1 information I've found that is definitive, but this is
2 pretty close.

So from preliminary estimates, this approach would require the certification of approximately 1,260 ATTS. So I just want to remind you there is a number -- we did some calculations and we came up with this number. That will not be the line. That will not be the bright line. The bright line will be each county -- the bright line for each county.

But a lot of people want to take a look and say, "Well, you know, to get our hands around this, to get our minds around this, how many technicians are we really talking about?" And my guess, guesstimate ballpark number is 1,260.

So at this point we're going to open up for a discussion, making comments available. Again, please step up to the microphone.

18 So do consider this: all comments are public and subject to the Freedom of Information Act. Comments can be 19 20 in person, via WebEx or written. All comments will become 21 part of the public record. Please announce your name 2.2 before you comment and speak into the microphone. 23 And we'll go ahead and check here real quick into the chat, okay? And I'll leave that up. 24 25 And then we will go to the first person, so

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1 Chris Walker, you're up first.

2 MR. WALKER: So wait, we can't just turn the 3 microphone around and have everyone talk? 4 MR. LOYER: No, I'm sorry. Nah, nah, free-for-5 all? No. All right, all right. 6 MR. WALKER: 7 Again, thank you for having the workshop today. It'll be very helpful if we move forward. Obviously I'm 8 here for the California Association of Sheet Metal and Air 9 10 Conditioning Contractors. We have put a lot of time and 11 energy into the NEMIC Program. We have a couple of 12 contractors here today that may want to speak later, that have done a yeoman's effort of trying to get their 13 technicians certified. And a good number of that 170 are 14 15 represented here today by these two businesses. 16 But we are very much interested in making sure 17 this program is a success. We would like to see the 18 program turned on as soon as possible. When we say 19 possible we want to make sure that the program does not 20 overwhelm the industry in a way that causes disruption, 21 particularly a political disruption that might come back 2.2 and revisit on the Energy Commission and its resolve to see 23 the program through. 24 When you look at the technicians certified on all 25 17 MEC (phonetic) forms, that is a question. And then

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1 again 16, 18, 17, whatever you see, one of the concerns 2 that we would have is if we've got technicians in the urban 3 areas to meet that demand, that we not wait around for ever until we get that one technician in Modoc County. We would 4 be very concerned if in fact we have a program ready to go 5 in some areas of the State, that are being held back 6 7 because of other areas. So we'd like you to look at maybe a staggered implementation if in fact we have certain 8 9 conditions met in certain areas.

The time, effort, and the cost per form is a very big deal. When we look at some of the time estimates, per MEC Form it can really add up. You look at the cost per form may be, you start doing some math, and there's a real cost for general contractors and building owners out there that need to be paid attention to.

16 And then it comes to the, are these new hours or are they existing hours, right? And what your presentation 17 18 showed was that largely it's not being adhered to. That's 19 why we have a regulation. We hear reports time and time 20 again of these forms simply being filled out in a 21 restaurant somewhere. And that means time is not spent 2.2 doing the test. And so when we look at the new hours, what 23 does that mean? 24 Most of the folks that are certified technicians

25 are test and balance technicians that are already

subscribed. And these would be additional new hours that
 need to be taken into account.

3 The big gorilla in the room to us, and what 4 stands in the way of a good program and a really bad 5 program -- and even worse than a bad program would be a disastrous program where people spend a lot of money and 6 7 lot of energy implementing and it doesn't turn out to do As you said since 2005 these MEC forms have been 8 anything. 9 required. That is what, 11 years ago? And how many local 10 building departments are insisting that these forms are 11 being done today? And that's 11 years later.

12 When you flip this on who's to say that the 13 building departments are going to have any different 14 perspective on this?

15 And you have contractors that are bidding jobs 16 based upon doing the work and actually getting it done. 17 That's going to be a lot different than a contractor 18 bidding job that plans on filling these forms out in a 19 restaurant. And if there's no local building official keeping an eye out you've created a bad situation, 20 21 particularly for the good contractors and the good 2.2 technicians that are out there to do the job properly. 23 So what we would like to see is, what is the 24 Energy Commission's game plan to get a change of behavior 25 at the local building departments? Even to this day, while

we have NEMIC out there and NEBB as approved ATTCPs, and we're getting technicians certified, we still have some of the largest urban areas in the State that you would consider environmentally progressive, that may not have that same sentiment at their building department. And that is troubling to people who are getting prepared to implement this program.

Cost for uploading forms. We've heard everything 8 9 from \$30 to \$50 per form just to be able to upload them 10 into the State system. We'd like to get a better 11 understanding of the provider of that registry and what the 12 costs are. It doesn't seem reasonable when you start looking or thinking about these 17 MEC forms on how many 13 14 different pieces of equipment on a particular job. We're 15 talking tens of thousands of dollars, just to upload forms in some cases. This could be a big shock. 16

17 The higher the cost associated with this -- high 18 cost where you're getting a product is one thing, but the 19 higher the cost where you're not getting, causes human 20 behavior to avoid compliance, right? Because now you've 21 got an economic incentive to avoid compliance, and if we 2.2 have a weak building department in that particular 23 jurisdiction we've done a lot of work for nothing. 24 So thank you for having this workshop. Hopefully 25 this isn't the last discussion that we have as kind of a

stakeholder group prior to the Energy Commission making a 1 2 final determination. We don't know as the Sheet Metal Contractors -- we don't know if the number 300 or 1,260 --3 4 we don't know what that number is, but we're very nervous that when we do turn it on we have the right number of 5 people. And they know how to do the job properly, so that 6 7 we don't cause disruption. Disruption that leads to economic disruption, leads to political disruption. And we 8 9 don't want to see the program go away. 10 MR. LOYER: Well, I'm glad to -- thank you, 11 I'm glad to see you guys are coming out in at least Scott. 12 general support for the program and with appropriate 13 Thank you very much, and keep yourself available. concern. 14 So Jim Huber? 15 MR. HUBER: Good afternoon. My name is Jim I'm here on behalf of NEBB. I'd like to thank the 16 Huber. 17 CEC for giving us the opportunity to participate. I think 18 this is a very healthy dialogue. 19 I'd also like to echo some of the things that I 20 heard from Mr. Walker -- couple of points that I'd like to 21 make. NEBB has been doing this for 45 years. And one of 2.2 the things that we've learned, when it comes to certifying 23 firms and technicians, is that it's much more productive for the CEC to set a date. 24 25 And I know that the 300 threshold is in the law.

And it's kind of handicapped you, because what happens is it's almost counterproductive for the people to comply with that requirement. Because by doing so, they're just going to cost themselves a lot more money that they don't have to pay right now. So trying to hit that threshold first is almost counterproductive.

7 What we've seen -- and we've done technician certification for a long time -- is that when you set a 8 9 date and people know there's a hard date they will start 10 getting their people certified, because they don't have a 11 choice. So if there was a way to get around the 300 12 threshold and go to a date. And you could even leave a 13 threshold that said if by this date we haven't reached 300, 14 then you would have a backdoor out. That would be the 15 quickest way to hit the 1,260, or whatever that number needs to be. 16

17 The other thing I'd like to comment on is when we talk about the counties, and the distribution throughout 18 19 the State, this is another thing where we've got a great 20 deal of experience. And we have the equivalent of ATEs and 21 ATTs that take care of ginormous -- I just invented a word 2.2 -- huge areas, geographic areas. And I'm talking about 23 contractors that serve all of Montana, all of Wyoming, all 24 of Idaho from one shop.

25

So what we have found is that the market will fix

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1 itself. If you don't have the coverage in the county, at 2 some point the market always corrects that. It's either so 3 expensive to get somebody to come in remotely that it's 4 worth getting certified yourself. Or it's not worth it and they're just going to pay people to come in remotely. 5 So I think that I would be less concerned in the 6 7 remote areas about getting the coverage down there. I don't think it's going to be as big of a problem. And I 8 9 know in our experience we've seen that it isn't. And that's all that I have. 10 11 MR. LOYER: Thank you, Jim. 12 Amber? Amber Ryman? (Indiscernible) 13 MS. RYMAN: 14 MR. LOYER: Oh, okay. And Dave Dias? 15 MR. DIAS: I'm Dave Dias with Sheet Metal Workers Local 104. 16 17 Actually, I agree with Chris, Mr. Walker's 18 comments. And maybe we can do a different approach and do the main urban areas first and then branch. Kind of like 19 the smog checks were in California. I remember that there 20 21 were only certain counties that they did it and then expand 2.2 it from there. The greater Bay Area and I think Sacramento 23 and L.A. and all that. 24 I don't know if Modoc County, Alpine County, all 25 those have that much building going on where we really need

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1 it, and eventually maybe move it out to that in a time 2 frame? Or something, I mean it's just an idea. 3 MR. LOYER: Yeah, yeah. I've just been thinking about that. 4 MR. DIAS: Ι mean, I sit on the CSLB. I see what goes on with that. 5 Like if you like want to use an example of 6 7 authorities having jurisdiction or the deal with units coming into California, replacement units, furnaces and air 8 9 conditioning -- back in, I think 2008, that the CEC did a 10 study on their strategic plans, and said about less than 10 11 percent were permitted. 12 And I was in a meeting in December. And the CPUC had a little demonstration, or whatever you want to call 13 14 it, and they said that less than 10 percent of HVAC units 15 get permitted. So to me that's about basically zero 16 percent increase in eight years. 17 MR. LOYER: Yeah. 18 MR. DIAS: So we've got an issue with that. Ιf 19 we do the same thing with this nothing's ever going to 20 change. That's what I'm getting at. We need to get going 21 on this. Coverage will get there. 2.2 Maybe like I said, do the urban areas first and 23 let it expand out from there. I think, I mean if you add 24 up Modoc, Alpine, Plumas I mean you're going to add up a 25 ton of counties that don't even equal San Francisco.

1

MR. LOYER: Oh, yeah.

2 MR. DIAS: So maybe we can do it that way first? 3 Yeah. You know, when it comes down MR. LOYER: 4 to it I think that -- and I don't mean to speak to cut you 5 off or anything. And we don't have a timer going, so don't 6 worry about that, but yeah I think these are good comments. 7 I'm not sure how we might be able to do a staggered implementation, but we might be able to do like 8 9 this bright line idea about each county has its bright 10 line. But you can include the service area of like for 11 thermal storage options installations. You can have 12 probably one company cover all of Northern California or maybe all of California for thermal storage. 13 14 That's because it's a very dedicated system. You 15 really do have to have a lot of experience in order to install it right and get it working, so there's only going 16 17 to be a few installations anyway. And so yeah, probably 18 only one company can cover all of it. 19 Then again when we have split systems, those are 20 everywhere, done by everybody. And no chance one company 21 is going to be able to cover all of that. 2.2 So yeah, I mean when we're talking about the 23 various types of installations I think it's very good to take a broader view and not allow Alpine or smaller 24 25 construction areas, construction intensity areas, to hold

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back the rest of the program. And I think that's 1 2 definitely a concern for the Energy Commission as well. I think that one of the pieces of information 3 4 that we're missing that maybe Dave and maybe others can supply to us is some examples of what forms they're filling 5 out for typical installations. Like a split system, a 6 7 simple system, a split system out in the field. You're actually doing it. And actual case examples of what forms 8 9 you're filling out. And then we can kind of see, to a 10 certain extent, what the impact is going to be. I think 11 that will come up as well when we talk about things like 12 the impact for having those forms registered at the ATTCP. 13 So I'd definitely like to have anybody and 14 everybody submit to us some case examples of what they do. 15 MR. DIAS: I'm sure our contractors would be able 16 to supply some information on that. 17 MR. LOYER: Good. Good, I appreciate it. 18 MR. DIAs: Thank you. MR. LOYER: So Patrick, Patrick Pico? 19 MR. PICO: Good afternoon, my name is Patrick 20 21 Pico. And I'm an instructor with the Bay Area Sheet Metal 2.2 JATCs. And I teach the ATT courses that we put on. And 23 have assisted NEMIC and ITI in developing the curriculum that's used in the training programs and also teach across 24 25 the United States on HVAC.

So I've been involved with this from way, way in the back when it was just being talked about and seeing where we're at. And I've seen a lot of the struggles and talked to a lot of the technicians that are involved since I've put on most of the training that goes on in Northern California.

And the one thing I keep asking, because I know what our current pool of test and balance technicians are and also the service technicians that we have out there that are commonly performing these tests. And we've been successfully able to get 180 technicians to come through the NEMIC Program to date to get certified.

But the pool is much bigger out there. And I ask, "Why are they not coming in?" And the biggest part of the enforcement. They're wondering why should they give up their time and their resources to donate in -- get this -added certification if it isn't being enforced out there, that they're not going to get something back on their investment and their time.

And same thing on our contractors, I've talked with many of them. "Why aren't you sending your personnel in to get trained to go out and do this?" And it's the same thing. "What guarantee do we have that this will ever get up off the ground, because we don't have a date? We don't have anything tangible to decide whether or not to

1 invest in it."

2	The infrastructure is built. The infrastructure
3	is there to train and certify and get people out there
4	doing these tests properly. We just need some further
5	action in people knowing that this is going to happen,
6	because it is a benefit for all the people in California in
7	saving energy, making their systems run better, and more
8	efficiently.
9	MR. LOYER: Thank you.
10	And Tom, Tom Meyer?
11	MR. MEYER: I'm Tom Meyer with the ESCO Group.
12	We are the nonresidential mechanical registry.
13	And a couple of points: number one, we can
14	support a staggered implementation and I agree that that's
15	probably one of the best choices. Because the sense of
16	urgency to get this program actually starting to go it
17	may be Dave's right, you know? We start with the large
18	metropolitan areas. And I think that's a great idea,
19	because then we start to show the industry that we're
20	serious.
21	Because you can't get people interested if they
22	don't believe it's going to happen. "We've heard that same
23	song for three years. Nah, that's never going to happen.
24	They're going to give up on it. We've seen the CEC before.
25	It's not going to be enforced." That's the second point.

Everybody in the room that has testified so far has said without enforcement we're not going to get compliance. And without compliance this program's dead. We can build it, but they won't come.

5 I know we're working to build programs. That's 6 why I suggested, Chris you get a hold of me, because we 7 have a presentation on what the registry does besides 8 upload forms. If you look at the application for NEMIC, or 9 for NEBB, we're seriously involved in the quality assurance 10 side of it, so enforcement is absolutely critical.

Now, one of the things that we're doing is we're leaving the stick to the CEC, but we're trying to get the carrot. And we're trying to make it useful to the AHJs, make it a time saver to use the registry. And because it's a single registry we have the advantage of being able to make it the central point of information for the AHJs, make it simple for them.

And as I said, Jim Huber from NEBB said that we need to set a date. And the SMACNA people said we need to stagger this thing. The message is the same. We need to get it going. We don't need to hold it up any longer than necessary. Let's make the numbers realistic and get going. Thank you.

24 MR. LOYER: Thank you, Tom.
25 At this point I'd like to ask anybody online if

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1 they have any comments to make, go ahead and enter anything 2 into the chat window. I've got it open, so you can enter 3 in there.

And if there is -- oh, one or two more -- very good. If there is anybody else in the room who would like to make comments, I will just give the people online a chance to say anything here real quick.

8

(No audible response.)

9 Good, okay. All right, we'll just keep going 10 here. I didn't bring my glasses in with me, and the last 11 name Davies?

MR. DAVIES: My name is Duane Davies and I'm with National Air Balance Company. We're one of the largest test and balance companies in California and we're very much in support of this program. I think we've probably got the single most certified technicians out there right now and we're very proud of that.

However, I've been in the test and balance business for 38 years. And when I first began in this process if you were a balancer you were a liar. And the biggest problem was enforcement. And I don't see anything in this program now that's going to provide the proper enforcement to allow this to be successful.

If you take your enforcement and put it on a
website most people will figure out how to fill out a form.

If there's no enforcement out in the field, with somebody actually coming out to see that things are getting done, I'm very concerned that this program will fall apart and/or just become a rubber stamp. So I'd really like to understand how it is we're going have people out in the field enforcing this?

And the local jurisdictions already don't have enough people to certify even the Fire Life Safety Code compliant stuff that needs to be done. So I'd like to understand the mechanism for the enforcement of it and know that it's going to be more than just a website.

MR. LOYER: I can do that to a certain extent right now, our general enforcement procedures and what we do for Part 6 right now.

15 Essentially what we rely upon is two critical 16 pieces. We do an education outreach program where we go to 17 ICC chapters. We'll go to the building departments. We'll 18 go to large assemblies and small assemblies of building 19 inspection professionals or their direct bosses. And we'll 20 do a presentation of exactly what Part 6 requires, how to manage compliance. We'll work within individual 21 2.2 jurisdictions to help them set up.

We have had instances where we've actually been called upon to intervene for a builder or for a contractor that is trying to do the right thing and is not getting a

response from the building department or getting an inappropriate response from the building department. We will go to that building department and we will educate them on what exactly they -- where they went wrong and what they need to do in the future and how they need to enforce the standards.

7 Through that effort we have many times come across local jurisdictions that have wholly inadequate 8 9 programs either for fire, life and safety. We've had one 10 that was doing none of it. That was issuing permits and 11 not inspecting anything. So we work with them to get their 12 program up and running, get them into an electronic 13 program, make sure that they educate their people, and make 14 sure that they write their contracts for inspectors 15 appropriately.

We've been working with local jurisdictions for a long time. Now, when it comes down to it the Energy Commission does have a bat to use. We can, if it becomes absolutely necessary, we can make it so that the local department cannot issue a permit without first coming to the Energy Commission.

Now the Energy Commission won't take over things
like Fire, Life And Safety. We have no authority for that.
But we will take over things like the enforcement of Part
So they can issue their permit to a point, as

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1 appropriate, up to the Part 6. Then that permit has to be 2 sent to us. And all the evidence has to be sent to us. 3 And then we approve that plan and send it back for permit 4 issuance. Now, we've never had to go that far. Just the 5 specter of doing that has been enough.

I'll tell you another piece of information that I 6 7 found out when I was investigating exactly who has authority over things like Fire, Life and Safety, because I 8 9 was concerned about that. No state organization, no state 10 body actually has the authority to take the permitting 11 authority away from the local jurisdiction. The Energy 12 Commission has only as far as Part 6 goes. And we are the 13 only one.

The only other way for a local jurisdiction to be forced into doing proper inspection, doing proper permit issuance, plan approvals, all of that, is for the local constituency, the citizens, to actually file a civil suit and force them to do that. Now, that has actually happened in several times.

And part of the reason why the Energy Commission uses forms the way we do, is to allow for that record to be created. Once that record is created then the actual injured party, the building owner, the people who are actually -- the tenants who are actually using the space, the builders themselves, actually have something they can

1 use to bring to a court.

So it is never going to be easy. It is never 2 3 going to be simple. Now all of that said, one of the 4 things that gives me a lot of hope is that we have 5 implemented the lighting controls and we are getting the appropriate responses from local jurisdictions. 6 We are 7 actually going into local jurisdictions that are major jurisdictions and walking through with them how they are 8 9 actually enforcing this and they are coming up to the exact 10 right answers. They are looking for the logos. They are 11 making sure that the actual person signing them is somebody 12 who is legitimate. They know how to actually check the 13 name.

And the ATTCPs are making it easier, actually 14 15 easy for the local jurisdictions to enforce. And that's the real key. If it's the same way for mechanicals as it 16 17 is for lighting, and it's the same from one county to the 18 next, then it's easy for the local jurisdictions to turn 19 that and say, "This is the same. You know, I'm an 20 inspector. I worked in L.A. This is how we did it in L.A. 21 and look low and behold, this is how you do it in Modoc 2.2 County too."

And if we can do that, if we can provide them with the simple road to enforcement, they will take it. They want to do their job. They want to. They just look

1 at the pile of paper work that we have created, out of 2 necessity, and they are daunted by the task. So if we make 3 it easier on the local jurisdictions that will go a long 4 ways into making enforcement a reality.

5 And beyond that I would say you're absolutely 6 right. Enforcement is the key to making this all happen, 7 but it's not just enforcement.

MR. DAVIES: But my fear is you're talking about 8 9 enforcement of the process. And what I'm concerned about 10 is first off, the rigor of these forms is very, very 11 strong. And it's going to add time and cost to the end of 12 a project or during a project. And there's already undue 13 pressure put on the trades to get things filled out and 14 corrected and done. So the rigor that gets put into some 15 of these can be less than.

16 And I'm concerned that the forms that are going 17 to be filled out could be filled out in a very -- in a 18 fashion that's maybe not intended. So whether it's outside 19 air measurement, whether its measurement of shutoff valves, 20 whether it's demand and all that, there's all kinds of way 21 that those forms can be filled out and you'd never know if 2.2 they were filled out right or wrong. 23 MR. LOYER: This is totally correct.

24 MR. DAVIES: And so much like -- we're many of us 25 in here are test and balance people, we're certified with

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1 different agencies. And even then it's very difficult if 2 not impossible to enforce work that's done correctly. So 3 how does that get enforced in the field?

I mean, I understand your process on the website, but I'm not understanding how you enforce in the field. And if we start this thing off with too few people, there's going to be a tremendous amount of pressure put on our technicians to do less than.

9 MR. LOYER: So basically, that is we try to 10 address that in Quality Assurance. So that's the whole 11 point of Quality Assurance. So that's why it's so 12 expensive.

13 For lighting controls, they have a series of 14 processes that they go through. Its first and foremost 15 they do a desk audit on all the forms that are turned in. 16 They have the plans that have to go with that, so that they 17 can actually see that. "Okay, I should have these forms 18 for these rooms. I do have them, or I don't have them. 19 They should be in this ballpark. The numbers should be in 20 this ballpark." And that is to be done by an expert that 21 is employed by the ATTCP.

The requirement then is to -- or for a certain number of them to actually go in the field with the ATT and walk with them through a program, through a project, and make sure that they are filling this out -- the shadowing

1 of requirement.

2	That has brought a lot of problems to light with
3	the training for the ATTs. And for getting them to
4	recognize that it's not going to be as easy as they think
5	it is to I'm just going to say cheat. But when it
6	comes to the mechanical side, that is a much more difficult
7	process, so it becomes a requirement that we do a higher
8	level of desk audit to begin with.
9	So NEMIC right now has got a requirement for
10	essentially roughly a 10 percent desk audit. So 10 percent
11	of all the forms that are turned in by an individual ATT
12	have to be reviewed by an expert journeyman by NEMIC.
13	Those forms, if there is a problem, if there is anything
14	that is unusual or suspicious in terms of those entries,
15	then that technician gets a field audit.
16	Now we looked at that and said, "All right. That
17	is at least the beginnings of a good quality assurance
18	program." NEMIC actually is very good at this. They are
19	very good at fining their people. But you're right,
20	there's always going to be opportunities for technicians to
21	cheat. There's always going to be opportunities for
22	somebody to use somebody else's license or certification
23	number. That's always going to be there.
24	And it's on the Energy Commission and the ATTCPs
25	to be responsive, to keep a mind open, our eyes open as to

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what's going on and to check, and to check. That's what we can do.

MR. DAVIES: Well, when we're talking about a number between 300 and 1,200, whatever that number is, you're talking about desk audits. What number of people you have doing that will be done timely, so that we're not delaying jobs or having to go in six or eight months later if we find an issue?

9 MR. LOYER: Well, for mechanical it's done post 10 job. So they'll have the plans, the forms, the certificate 11 forms, the insulation forms and the acceptance test forms 12 to work with. So there won't be, there shouldn't be any 13 delay, no shouldn't be.

MR. DAVIES: Well, our concern is if you discovered something that looks suspicious and now you need to do a field audit that could be very cumbersome to do inside an occupied building.

18 MR. LOYER: Right, absolutely. Yeah, most of the 19 time if there is something that is suspicious, yeah there 20 is a possibility of them actually going to that building 21 and saying this was not done to code.

MR. DAVIES: Thank you.

23 MR. LOYER: Sure.

2.2

24 Before we go on to the next speaker here, we 25 actually have somebody from the chat window here. Let me

1 get my mouse control there. Okay, so we'll start with the 2 first one here.

This is from Finlay Drake. "I want to confirm that there is a program available for commissioning agents and professional engineers to get registered as ATTs."

That is actually provided in code, so just 6 7 because you're a commissioning agent or a professional engineer does not mean you cannot be an Acceptance Test 8 9 Technician. You have to have the minimum requirements. 10 For some it's going to be three years, for NEMIC you must 11 be a part of their union. And I believe it's five years 12 for them. So but you just have to qualify. And that's it. But you can be a commissioning agent or a professional 13 14 engineer.

I would say generally NEBB is probably going to be your best bet, but if you can get to NEMIC as a union member I'd say they've got a good program too, so.

18 This is from Jerry Weiss. "The registry is 19 developing a number of checks and balances to address the 20 desk audit issues. And we will be providing an internal audit on 100 percent of the forms submitted." And I 21 2.2 appreciate your submitting that, Jerry. Thank you. 23 And let's see, Dave here at the Energy Commission, Dave Lawson? 24 25 MR. LAWSON: My name is David Lawson. I'm with

Lawson Mechanical Contractors. I'm a mechanical contracting firm here in Sacramento. We've been around since 1947 and do work all over California. I also am on the Board of CAL SMACNA. And CAL SMACNA has been following this issue for quite some time. I am an acceptance testing employer. And I have a Fresno office and my manager down there is an acceptance testing employer also.

8 We are all for the program. I think there's two 9 kinds of contractors that look at this program and are 10 concerned. They're the ones that think, "Oh no. I will 11 now have to step up my game, because my works is going to 12 be checked." And then there's contractors like me who's 13 not worried about installing a faulty system. But what I'm 14 concerned about is the certainty and the risk.

15 Contractors want two things. They want certainty 16 and they want to perform. And a part of the uncertainty of 17 this whole program, when it starts, how much forms cost, 18 makes things very uncertain. And contractors don't like 19 that. And this speaks of the ability to perform and fail 20 or not fail.

And how do contractors fail? Well, on bid day I can fail by having either too much money in my bid or not enough. So the contractors who are going to skirt this issue are going to have an economic advantage over me on bid day. So I'm going fail on bid day, because I'm doing

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1 the right thing to include the cost of this program in my 2 bid.

3 Then, once the program is underway, and I'm 4 actually doing the work I want to make sure that I'm able 5 to perform it the way I'm supposed to. And I don't currently have an acceptance testing technician. Once the 6 7 program is rolling and under way, I will certainly have my own acceptance testing technicians and it's likely that in 8 9 some instances I will perform that work myself as a contractor. And there are other times I will subcontract 10 11 it out to Mr. Davies, depending on the job and the risk 12 etcetera, etcetera.

13 But within this program I don't want to hire just 14 any acceptance testing technician, because a part of the 15 failure is I don't ever want to get a letter from the CEC 16 saying, "Hey, we did an audit of your program and we found 17 that you did something wrong." I don't want that ever. 18 I can't go out in the field and babysit the technician as 19 he does his work to make sure he does it right. So 20 therefore I have to have a really good relationship with 21 those people, that person, who's doing that work.

So I guess to sum up, I urge for things to become certain as soon as possible. And I think a lot of the anxiousness in the contracting community is going to go away. And enforcement is definitely key.

I do know that good contractors are held to a
 higher standard. And contractors who aren't as good are
 definitely held to a lower one. Thank you.

MR. LOYER: Let's see, I don't have any more blue cards. So I think one of the things -- and this actually comes back to why I asked Chris not to go anywhere. So one of the things I'd like to kind of discuss -- and we've got a little bit of time -- so one of the things I'd like to discuss and flesh out a little bit more is this whole idea of staggered implementation.

11 If we do something like that my presumption is 12 that we would probably have -- we would probably see the 13 Los Angeles area, not just Los Angeles County but Los 14 Angeles area, probably go first. We would see San 15 Francisco maybe go with them, the Bay Area generally go 16 with them.

But what does that mean for the counties outside of those areas when it gets to the point of, how long do we wait for that to be a requirement, for the certification to be a requirement in these outlying areas?

21 So anybody who's got some thoughts on that, I 22 think I would like to hear from them. And if anybody does 23 not get their thoughts in and would like to, please feel 24 free to submit written as well. So, yeah. 25 MR. WALKER: Chris Walker, on behalf of the

California Association of Sheet Metal and Air Conditioning
 Contractors.

You know, I don't think there's any good answer that question, but when you look at getting this program going you look at Los Angeles. You look at the Bay Area. You're going to have a lot more resources to work with to make sure the program is successful.

8 I would definitely put dates on when those 9 counties are coming and then when the subsequent counties 10 are going to come in. So everyone has a target to shoot 11 for. You don't have new conditions that you kind of lay 12 out that have to be met, because again I think people will 13 kind of drag their feet.

14 But if you establish implementation in the two 15 big urban areas of the state and look at what happens 16 there, right? And look how the building departments are 17 responding, look at how the contractors are responding, 18 look at how the building owners are responding. At the 19 same time, you have another date that's maybe six months, 20 twelve months later, for these other counties to come in, 21 you can make some adjustments potentially with those.

But get the big counties going where you have the training centers happening, where you've got the technicians certified. Not all counties are enforcing right now, right? And maybe what you do is you basically

1 say the enforcement date. You know, the CEC's going to be 2 auditing the building departments in this county on this 3 day going forward. These counties we start first and these 4 counties we start twelve months later.

5 To us, we just need to get the program going. 6 The uncertainty that Dave spoke to, that you heard. You 7 need to have something to work towards whether or not it's a number of technicians, whether or not it's geographical 8 9 coverage of the ATTCPs, depending upon the classification 10 of the people that are coming through the program. Those 11 are somewhat vague and ambiguous in terms of a hard 12 deadline. We definitely need hard deadlines.

MR. LOYER: And I can appreciate a hard deadline as well. I mean it does have a certain amount of -- it has a certain amount of certainty to the whole program that isn't there otherwise. Without a hard deadline, I can see how it looks like oh, this could just keep going on, and on, and on.

And I think staggered implementation, it might be achievable. One of the issues is going to be first and foremost "Is this significant enough that we actually have to go through a rule change to do it?" That's going to be one of the issues that the Energy Commission has to address.

25

So that will be something that I think that we

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1 can address to a certain extent. We'll have to go 2 internally to discuss that particular issue. If it is a 3 rule change that is more or less a year-long process, so 4 that would probably not be a good idea then. But that would be one of the first questions I would answer. 5 And to get to that one of the things that I would 6 7 look at is to say, "All right, if we are going to go staggered implementation how are we going to determine how 8 9 much, when to do that for just L.A. County?" 10 So for L.A. County, where most of the building is 11 going on, how do we determine when is the right date to 12 actually pull the trigger for L. A. County? 13 The first one, you have to speak into a 14 microphone. 15 MR. WALKER: Again, you have to get at the equation of how much of this is new man hours versus 16 17 replacing existing man hours, right? 18 MR. LOYER: I think you said it right. I think 19 when we look at the current compliance it's all new man 20 hours isn't it? It shouldn't be. I hate to reward that. 21 And there's a certain amount of me that says we're not 2.2 going to. But to be honest, to deal with the world as it 23 is, they are new hours. 24 Go ahead, Tom. 25 Tom Meyer from the ESCO Group. MR. MEYER:

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One of the things that we haven't talked about is the capability of the registry to have the employers or the ATEs self-identify market areas. The NEMIC people have 160, 170, 180 people certified. But we don't know how many market areas that actually effects, okay?

So maybe an interim step would be for the NEMIC 6 7 people and as NEBB's employers come online, we start to have them identify within the registry what their market 8 9 areas are, so we can start doing a snout count. You know, 10 actually start saying, "Okay. We've got 170 guys that have 11 metropolitan L.A. addresses. Does that mean we only have 12 170 technicians in L.A. and no place else?" And I think 13 that's probably unreasonable or an unreasonable assumption.

So if we can start getting the NEMIC employers to start self-identifying we can start painting in the counties. It may be a better picture than one we're talking about right now.

18 As far as getting one county or the metropolitan 19 areas like the guys are talking about, I think that's a 20 wonderful idea, because it allows us to win the hearts and 21 minds of the smaller AHJs, because those are the ones that 2.2 are going to be the hard sell. You know, the one-and-two 23 guys shops that don't need the headache. But we can get 24 out and start educating them. We can start motivating 25 them. We can start doing all the things we need to do, but

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1 the fact that we've got the programs working in L.A. and in 2 San Francisco allows us to make our mistakes, as somebody 3 pointed out. You know, we learn how to improve our 4 programs. 5 But I think by getting -- the first thing we've got to do is find out what we've really got. You know, how 6 7 much coverage do we really have right now, because we have Have your guys declared what market area they 8 no idea. 9 have for NEMIC --- for NEMIC searches? Does anybody know? 10 UNIDENTIFID SPEAKER: They have. 11 MR. MEYER: Well, one of you -- pardon me? They 12 have. 13 UNIDENTIFIED SPEAKER: Yeah, we have a list of 14 all the counties that they're in. 15 MR. MEYER: That they service? 16 UNIDENTIFIED SPEAKER: (Indiscernible) up and 17 down the State. 18 MR. MEYER: Oh, okay. Okay. So when you went in 19 as an employer did they ask you where your market area is? 20 UNIDENTIFIED SPEAKER: They asked me to identify 21 those counties I was willing to go to. 2.2 MR. MEYER: Okay, same difference. Right, right, 23 right, good. The answer was is yes, they had you identify 24 your counties that you would go to. 25 So I think that's what we need to do. I think

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1 that's our next step. You're going to have to get with 2 your bosses as to whether they'll let us break it down into 3 localities, but I can see this as being very positive. And 4 as far as the registry is concerned, we can support that.

5 MR. LOYER: Okay. Yeah, I think that's very 6 good. I can see some positives from doing this as a 7 staggered implementation on our end as well, being the 8 enforcement side.

9 If we're dealing with larger, more sophisticated local jurisdictions it'll be a lot easier sell for them if 10 11 we walk in and say, "Okay. We're ready to implement this 12 in your county. We want you trained and understand exactly what you're going to start seeing. And understand that you 13 14 should not be accepting forms unless they have these 15 stamped logos on them and how to ensure that you've got a legitimate technician that's doing the work." 16

I think if we do that on a smaller case, maybe in a staggered area, maybe starting with the Bay Area, who's already very out in front of this. One of the things the Bay Area is doing I hear -- I hear by rumor -- is that they are requiring the lighting controls ATTs to actually be third-party.

We really do need to have a discussion with local jurisdictions about that. But if that is the case -- and for the Bay Area I would not doubt it -- so they seem a

1 little bit more progressive along those lines. Los Angeles 2 County is sick and tired of being described as a county 3 that does not enforce regulations. They've come to us 4 several times. Los Angeles City has been up here at the 5 Energy Commission several times. They've actually got what 6 we call a local ordinance to go above code.

7 They require cool roofs at this time. They're
8 looking as a mandatory installation for residential.
9 They're looking at requiring that for non-res, I believe.
10 And they're looking at a 2016 local ordinance that they can
11 develop that might go beyond cool roof.

12 So we have some interest from what I would describe as friendly, local jurisdictions that I think 13 14 would be very helpful along these lines. And if we can get 15 them on board, just like Tom says, we can iron out a lot of 16 problems that are going to show up that have to show up. 17 That it's not going to be a perfect implementation first 18 time out the gate. But if we have a lot of problems show 19 up we can iron them out with very sophisticated and 20 friendly local jurisdictions. I think it might actually 21 work out pretty well. I can see it working out well. 2.2 On the other hand, I could see this being a

23 pretty bad implementation, as far as smaller counties are 24 concerned, if they feel left out. If they feel that their 25 concerns aren't being taken seriously. If they feel like

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the Energy Commission or anybody else is basically telling 1 2 them that they cannot build when they have the authority to 3 make that judgment, yeah I can see that being a big political problem for us. 4 5 So I know you want to stand up and say something. 6 Yeah, make sure you get to the mic though, Dave. 7 MR. DIAS: Dave Dias with Sheet Metal Workers Local 104. Why wouldn't they be able to build? I don't 8 9 get that. 10 MR. LOYER: If we make it mandatory, in their 11 area, that they get certified technicians and there aren't 12 technicians available. 13 MR. DIAS: Oh, I see what you're saying. 14 MR. LOYER: Yeah. 15 MR. DIAS: Well, the step to approach again, if 16 like you say the Bay Area first or whatever or L.A. or both 17 of them at the same time, and you start there. You give 18 them some notice. You go to all 550 AHJs in California or 19 however many it is, if we can do that. And say Mr. 20 Walker's idea of dates, "Okay, this date this county is 21 going to go to this." 2.2 It gives the contractors time to get guys trained 23 and everybody -- you know NEBB and NEMIC. Everybody can 24 get together and understand where the end points are going 25 to be in each county. So the authorities having

jurisdiction will know that and understand this is what's 1 going to be. Now we need to train the inspectors what to 2 3 look for. Trust me, I sit on IATMOS ((phonetic) Codes and 4 I understand that a lot of inspectors don't know what to look for. 5 6

Oh, yeah. MR. LOYER:

7 MR. DIAS: Okay? So and you have also inspectors that do everything, not just mechanical, they do 8 9 electrical, they do the whole building in smaller 10 jurisdictions. So you have issues with that as well. 11 MR. LOYER: Yeah, they're also the chief building official and maybe the janitor at the end of the night. 12 13 MR. DIAS: Exactly.

14

MR. LOYER: Yeah.

15 MR. DIAS: And then maybe the government agencies 16 can work together with the CSLB, to let the contractors know this is coming up. I'm a Board Member of the CSLB, so 17 18 I know that information doesn't get out to everybody.

19 MR. LOYER: Oh yeah, yeah. And I can see the 20 approach kind of building in my mind that we have first 21 tier execution when we do this in stage one. We have 2.2 second tiers, third tier, maybe fourth tier to get to all 23 the different counties. And we let them know where they 24 are. And we make a bus tour out of it, yeah. 25 MR. DIAS: I mean right now, the way it is if we

1 have 300 technicians it kicks in, correct?

2 MR. LOYER: Well not just that, but yeah 300 3 technicians and we have to have full access. There are 4 certain hurdles that are in place here that need to be 5 achieved. So the access of training certification has to 6 be demonstrated that engineers, commissioning agents 7 actually do have legitimate access to the training.

8 If that happens it will have the ATTCPs actually 9 put together a report that says, "Here are our technicians. 10 Here are our employers. Here is how they're registered 11 otherwise either as commissioning agents, PEs, maybe all of 12 the above." And we'll go from that point to say, "Okay. 13 It's very clear that we have access to training of all."

Then the 300 will have to be tested very similarly. It'd be a report from the ATTCPs. And then the Energy Commission has got to answer that question for themselves, "What is the impact to the industry?" We have to be conscientious of that.

But I think this sort of staggered approach --yeah, this leads us to a decent answer.

21 MR. DIAS: Well, what I'm getting at is if we 22 didn't do something like that or even put time tables on 23 it, all of a sudden it kicks in, how much time do you give 24 somebody? Okay. All of a sudden this switch flips and 25 this county has to come up to compliance or whatever,

1 everybody from February 29th it got kicked in, March 1st
2 you've got to do it.

3 Or do you give them time? That's what I'm 4 asking.

5 MR. LOYER: Right, yeah. I think one of the 6 things that comes up, of course, to everybody's mind is 7 okay, what if a local jurisdiction, the date comes due and 8 they decide, "You know what? We're going to see if you're 9 serious. We're not doing it."

MR. DIAS: Yeah. One other last thing I really want to say is Duane Davies, who is right spot on about enforcement -- I mean I sit on the CSLB, you see it over and over and over and over again about just non-union or not non-union, or non-licensed contractors and just how much that's an issue. I mean over and over and over.

16 If this thing's not enforced correctly, you might 17 as well as burn it right now, the paper it's written on.

MR. LOYER: Yeah. And I can see the staggered approach actually gives us an ability to deal, like I said, with friendly local jurisdictions -- Bay Area and Los Angeles -- and work with them to make a better program, coming out the gate. Yeah, I can see a lot of positives to this.

24 MR. DIAS: Thank you.

25 MR. LOYER: You bet you.

1

Yeah, sure.

2 MR. WALKER: Chris Walker with Sheet Metal 3 Contractors.

Once again, given the importance of this program for all sorts of environmental, air quality, other reasons, you could probably engage in an emergency rulemaking proceeding where you could abbreviate the time down to a few months versus a year. And you may want to explore an emergency rulemaking to get back into 10-103-B, make the appropriate changes, put some hard dates in.

The SMOG Check Program, when that was being implemented you had to have certified equipment and you had to get the technicians tested and certified, right? No one would buy the equipment until the month before they had to, because they didn't want to be putting their cash flow somewhere and testing cars on a new piece of equipment that they didn't need, right?

18 Same thing here, that's why you need a hard date. 19 And people are going to be slow to sign up for the 20 programs. People are going to be slow. You just need to 21 go out there and do it. And I think an emergency 2.2 rulemaking, implement L.A., Bay Area with a hard date, and 23 other counties with a secondary hard date staggered behind them gives you the opportunity to focus your enforcement 24 25 resources, work with the local building department, work

1 with the local contractors and learn as you go.

2 MR. LOYER: Yeah, I think those are points well 3 taken. And we will look into the possibility of doing a 4 rulemaking if it's necessary. My main objective would be 5 to try and put this together so that a rulemaking isn't 6 necessary.

7 Emergency rulemakings? They're great, they implement really quick, it doesn't alleviate you anything. 8 9 You still have to go through the regular rulemaking later. 10 So it just allows you to put the rules in place and 11 implement now. But later on you do have to go through and 12 if you don't -- if you aren't successful in your regular rulemaking that must follow, then you are required to 13 14 remove the rule from the book.

MR. WALKER: But at least you got the date out there. You got it doing. And this is about the health and welfare of the State, so it meets the criteria for emergency rulemaking.

MR. LOYER: I would tend to agree, but we'll see if we can't avoid a rulemaking altogether. That would be the best.

Yeah, go ahead. Oh, and just for people online, I am still looking at the chat box. So I have it up and displayed the whole time. So if you do make a comment, I will read it out.

MR. LAWSON: David Lawson again, so a couple of
 things.

When I took that test, the four-hour test, I made a critical decision to disclose what counties I would be willing to do work in. Now I was taking the test, so that I could do the work myself, the work my company performs. I have no interest whatsoever in going out and doing just acceptance testing for another contractor.

9 So, when we're going to look at geographic areas, 10 what contractors agree to what geographic area, it would 11 be helpful to know what contractors are willing to just bid 12 this work. Because my concern was when I check all these 13 counties is that I'm going to start getting emails for 14 counties that I have no interest in going to whatsoever. 15 So when I come in, in the morning, and delete the 40 or so junk emails that I get every day once this program hits I 16 17 realize there's probably going to be another 100 or just 18 from acceptance testing, asking me to bid jobs that I'll no interest in bidding whatsoever. 19

The only thing I thought might be interesting to know about is what jobs are bidding where, but I can get that from the Daily Pacific Builder or the Sacramento Builder's Exchange. So I think you need to caution about what contractors are willing to go where.

25

I had a second point, but I've already forgotten

1 it, so my apologies.

2 MR. LOYER: So just real quick, The Daily Pacific 3 Builder and what was the other one?

MR. LAWSON: The Daily Pacific Builder, which they list jobs to bid, public work jobs typically. Sacramento Regional Builder's Exchange, they have a plan review, you can go on there if you're a member and see what's available to bid there.

9 So it's kind of hard for me to want to know 10 what's going on up in Humboldt County acceptance testing-11 wise, because I have no plans to go up there and bid a job 12 just for that. I would do work in Humboldt County if it's 13 the right job, but I'm not going to go there just to do 14 acceptance testing.

15

MR. LOYER: Good point.

16 Tom Meyer, with the ESCO Group again. MR. MEYER: 17 Regarding what your point was, that you just 18 made. That brings up an interesting point, because when 19 employers -- one of the things that Joe Loyer and I were 20 talking about is when employers identify in the registry 21 for their availability, we were going to put in two 2.2 columns. One was going to be, "Would you be willing to do 23 the work and do the inspection?" And, "Would you be able 24 to be just a third-party inspection?" You may want to go 25 up there just to do a third-party inspection, because its

one day you might need some filler work. Who knows? So
 we're going to make a distinction.

3 Now, what you don't know is in the registry 4 there's a whole bid acceptance process where when you 5 identify, those are the only jobs that show up. You don't -- when you go into the registry as an employer you can 6 7 modify your market area. So if you start getting junk mails from places you don't want to go then take a look at 8 9 your registry information. And you can modify it, so you 10 can curry it yourself, okay?

But I did I did want to remind you, Joe, that we had talked about the different between third-party and doing the work yourself. So we need to maybe make those adjustments.

15

MR. LOYER: Okay.

16 MR. MEYER: Oh, if you have questions 17 specifically about what the registry's capable doing, I can 18 get you with that. Ask me for a business card. It might 19 solve a lot of your concerns for anybody in the room.

20 MR. LOYER: Okay. Yeah, you want to go ahead and 21 -- yeah. Is there anybody else that would like to make a 22 comment?

MR. LAWSON: Wait, I remember my second point.
MR. LOYER: Excellent.
MR. LAWSON: Frequently when -- I'm a larger

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contractor, but I don't consider myself one, and frequently 1 2 when you bid a job, you know, I might get awarded one out 3 of every ten jobs I bid. So I might bid a job that has a requirement that I can't currently meet, for instance 4 5 having a full-time safety person available for that job or a full-time quality control person for that job, something 6 7 like that. But I'll bid the job, because I have what's called a 10 percent chance of getting it. 8 9 So if I'm going to bid a job in let's say the Bay 10 Area, and I know that acceptance testing is going to be 11 required, whether I can actually do that or not I will 12 still bid the job. But I know that once I get the job I 13 now have to step up and be able to perform that work. 14 So I don't know that having the acceptance 15 technician on staff is really that important, but just 16 being aware that I have to fulfill that requirement, I will 17 not keep that -- I mean, keep that from me bidding on that 18 job. That's all.

MR. LOYER: Thank you.

20 Would anybody else like to make a comment in the 21 room? And would anybody online like to?

Yeah, sure. Go ahead.

23 MR. SMITH: My name is Steve Smith with Pacific 24 Test and Balance.

Joe, a lot of the discussion that we had actually

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on Friday, one of the things to reiterate, the whole process about having the enforcement and getting a date for it on this was something that somebody said to me that kind of shined a light on it for the previous Title 24 documentation.

6 In 2012 I took a class that talked about the new 7 Title 24 Regulations coming up. And I had a mechanical 8 contractor in there say that they weren't too worried about 9 it, because it took four years for the previous one to be 10 enforced to them. And so they weren't too concerned about 11 it.

So as such, when they made the comment about all the changes that were there their comment was just, "We'll just wait to see and once we start seeing it happen then we will purchase the equipment, we will get the training. We will then hire the people."

17 I agree so much with what's being said here is 18 that if there isn't a date moving forward, as someone said, 19 you don't make that date it won't happen. And if there's 20 an area that doesn't have a contractor listed that's pretty 21 That means NEBB and NEMIC, all they have to do is simple. 2.2 look over and say, "Okay. There's a contractor in the 23 county next door." If they knew there was a job coming 24 down the pipeline they would just make a phone call over to 25 them and say, "Is it possible that you would do a county

1 that's only right next door?" And they would sign up and 2 say, "Yes."

So I don't think the county, the empty county area, would be a justifiable reason to not make it happen. Because if there is nothing in that county that's listed or a contractor is signed up now, that's mainly because there's probably so little work going on right there that no one's even thinking about it.

9 If there is suddenly a job there that needs to 10 have somebody to do it, we're going to put a price on it 11 and we're going to bid it. That's not an issue. You know, 12 we will make it happen and we will go out of our way to 13 make it happen if there is a fixed date and time there.

Look at these people right here that are involved. You made a date to make this happen, they made this. I'll tell you right now I drove my house in Castro Valley to Shasta and back here to make this.

18 You put a date, you put a time, this gentleman 19 here that flew in from across country, there's people that 20 have driven -- Duane's driven in here from the Bay Area There's a lot of us that have. You make that date. 21 too. 2.2 You enforce that date. These things will happen. 23 MR. LOYER: Okay. Thank you, Steve. Ι 24 appreciate it. 25 Would anybody else like to make a comment? And

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from Jerry Weiss online let's see, "Contractors will 1 2 scramble to comply once a date, certain deadline is set." 3 So thank you for that, Jerry. 4 Is there anybody else online that would like to make a comment? 5 Let's see, does anybody have the agenda in their 6 7 hand real quick? I think there was a break time that was insinuated. 8 9 UNIDENTIFIED SPEAKER: (Off mic) 2:00 o'clock to 2:15. 10 11 MR. LOYER: Oh, well that's long gone. So I 12 think this was a good discussion and I'm glad we didn't stop for it. 13 14 Well, as long as there's no other comments let me 15 just quickly go back to the slide show here. Actually, I'm 16 going to need to close that real quick. 17 The Next Steps, basically what we're going to do 18 is like we said we're going to actually take all these 19 comments and we're going to consider them and we're going 20 to see what we can do. 21 Bottom line, I think there's probably going to 2.2 need to be another workshop. I wouldn't want to try and 23 put together a staggered implementation without there being another workshop, but that's a decision that's a little bit 24 25 above my pay grade to move forward.

1 I think this is worth consideration. And I hope 2 that everybody here has signed up and left their email, 3 because I probably am going to be contacting you for a little bit deeper information. That said, I would also 4 absolutely like to remind you that several of you promised 5 me case studies of the projects that you're working on to 6 7 see what forms you filled out, what forms you should have filled out, but maybe didn't. That's fine too. 8

9 I would just like to have a good idea of how many 10 forms you see on the jobs that you do. I was a bit shocked 11 when we looked at one residence, one, that had over 100 12 forms -- a hundred forms -- on it. I had no idea it would 13 get to that level.

I've seen others that were full build-outs on 14 15 residential that were thousands. So I have -- from that I know that I don't know how many forms are filled out on 16 17 these jobs, so I would like to know. And I would like to 18 know from the people that are actually out there filling 19 out these forms and doing them for each of these projects. 20 This is why a lot of you guys drive trucks, 21 right? You actually cart around the forms. (Laughter.)

22 MR. SMITH: Well, Friday we had to give a perfect 23 example, and that was a school. That was one of the 24 concerns I had that's coming up in particular. A lot of 25 schools, if you go in and you turn it, you replace -- by

the way, sorry, Steve Smith again. If you go into a school, and we have a simple package unit that's got four registers and such, a lot of times there's a requirement of about five forms that have to be done. So you can estimate as simply as five hours per form just to -- I mean, five hours per room.

7 If we don't have this date in place, and like I mentioned to you the other day, if the county is not 8 9 expecting to do all the Title 24, we complete the job, we 10 come into the complete issue on the job. And you throw the 11 switch the day before and don't give anybody a heads up 12 notice, and suddenly we have to go through these 20 rooms, these 20 package units, and do 5 forms each. And so you've 13 got 20 rooms times 5, you've got 100, right? 14

And we were talking about how much are the forms going to cost? Let's throw a rough number in there, it's \$75 apiece. Do the math. How would we like to go back and get a change order from the County or the City to tell them that this was not in the process when the job was bid, they didn't have the enforcement, and now the State is enforcing it?

22 So this is where again the date is important. 23 The cost of the forms is going to be a sticker shock to a 24 lot of the contractors that we're bidding to right now, and 25 the people that are out there. We have to get this stuff

1 out there and start notifying them this is coming down the 2 pipeline, because right now there's a lot of people that 3 are not estimating these costs in their jobs. 4 MR. LOYER: I agree. 5 MR. WALKER: Not just the forms, but the new hours in their bids. 6 7 MR. SMITH: And you mentioned about the new hours, yes you do have new hours. I will tell you right 8 9 now, right now I can't say the exact percentage that we're 10 doing, but a lot of the hours we are doing -- a percentage 11 of our hours are doing Title 24 forms. I can't say how 12 much is coming out of the Tab Department or the Sheet Metal 13 and the Startup. But I can tell you that we are doing them 14 now, so some of our hours right now are regarding Title 24. 15 I'm glad to hear it, Steve. MR. LOYER: Yeah. So (indiscernible) 16 MR. SMITH: 17 MR. LOYER: Yeah? 18 MS. RYMAN: I'm Amber Ryman with NEBB. 19 I wanted to comment on the forms as well. As a 20 large mechanical contractor in the Bay Area, I have -- I 21 know there's a big question on how many forms, you know, we 2.2 do do and what forms we are doing. So I started kind of 23 tracking them to get an idea. All the Bay Area projects 24 come through my desk for an initial review before it goes 25 out to the field. And at that point I decided I was going

1 to start looking at that.

2 In one month's span, or about seven weeks 3 actually, my firm logged 1,100 forms. Now, out of those 1,100 not all of them were correct. There were a lot that 4 5 were not applicable and will come back and be sent out to the inspectors as N/A. But they will get their form and 6 7 they will be able to continue on with the project. And that goes on to how Mr. Davies had mentioned 8 9 earlier -- you know you've been doing this for 38 years --10 I haven't been doing it as long, however I have been for 19 11 years. And in that time, things have changed. You know, 12 inspectors originally never would even be asked for these 13 forms, but we are at a point where now at least there is on 14 the Bay Area projects a final inspector asking for those 15 forms to be given to him, so he can walk away and say he 16 got them. 17 What he does with them at that point, we have no

clue and don't care. But if his next step is now to know that there's a logo on it that he needs to look for or whatnot at least there has been some change in the last few years in that aspect. So that says that they can hopefully be trained in the right direction if that training is available.

24 But I will definitely participate in giving you 25 whatever information on the forms in the future, but those

are just soft numbers that I put together in the last 1 2 month. 3 MR. LOYER: Thank you. Okay. Is there anybody else who would like to 4 make a comment in the room? 5 All right, we will check online here real quick. 6 Let's see, there it is. Okay, from Jerry. "Amber, are you 7 including the compliance forms within the 1,100 forms?" 8 9 So I just want to -- I was thinking about asking 10 that clarification as well. So there are basically the 11 non-res compliance forms. There are the non-res 12 installation forms and the non-res acceptance test forms. So is that all of them or --13 14 MS. RYMAN: No, those are just the 1-E and the 15 acceptance forms. So the other thing I did notice throughout those 16 forms are it's -- I was keeping track of how many 2s, how 17 18 many 3s, how many 5s, and the big percentage is the 2,3, 5, 19 6 and 7; 8 and 9 are usually marked off incorrectly. You 20 know, that's a system test, they are usually just marked 21 off for a pump, that type of stuff. 2.2 So you have the tests that are outside of those 23 first initial ones, those are not necessarily -- those are 24 the key ones. Especially if we're going to be doing a 25 staggered type hard date, you can potentially even do

1 staggered with these forms only in those counties, because
2 as also --

3

MR. LOYER: This keeps getting better.

MS. RYMAN: -- a large mechanical firm, who this 4 5 is our first year we're doing a thermal storage project, where I don't have somebody who has three years experience. 6 7 So I wouldn't even be able to provide somebody with the training for that at this point. And that makes a big 8 9 difference, because if thermal storage is not necessarily 10 -- if that's going to be our holdup on getting everything 11 done, because there's so limited work going on that could 12 be potentially a problem. So that needs to be considered as well. 13

MR. LOYER: So that would actually be some good information to have as well, is if just from your perspectives what forms are you seeing the majority of, have you ever seen a thermal storage project come through your house? That'd be great to know. Primarily, I'd just like to know what forms are the most important to you.

I don't want to -- you know, I have a pretty good idea of what they are. However, I don't want to miss one in particular. So if there's just after that callout for information, if you have any other sources of information that you think would be useful for me to put together a good argument to move forward with this idea of doing a

staggered implementation or doing any kind of an 1 2 implementation, I'd be more than happy to hear it. You can either send it to me directly or in which 3 4 case I will put it into Dockets for you or you can send it to Dockets. I see everything that goes into our docket, so 5 if you send it to Dockets I will see it. And I will take 6 7 it from there. At this particular point I can't say when the 8 9 next workshop will be or if there will be one. I think that this is not such a bad idea, this whole staggered 10 11 implementation and putting on hard dates. I definitely 12 want you to know that I did hear you and we are listening. And I think that this is probably not such a -- I'm glad I 13 14 had this workshop. I had no idea it was going to go this 15 direction. 16 So if there are no other comments, and if there are any other comments online? Seeing none at this point, 17 18 then we will go ahead and wrap up this workshop a little 19 early. And let everybody go home. 20 All right, thank you very much. And I think that that'll be the end of the workshop. 21 Thank you. 2.2 (Whereupon, at 2:43 p.m., the workshop 23 was adjourned) 24 --000-25

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I do hereby certify that the testimony in the foregoing hearing was taken at the time and

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