

STATE OF CALIFORNIA

82-RBS-1

ENERGY RESOURCES CONSERVATION

CALIF. ENERGY COMMISSION

AND DEVELOPMENT COMMISSION

FEB 14 1983

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In the Matter of:

AMENDMENTS TO THE CALIFORNIA RESIDENTIAL BUILDING STANDARDS (CAL.ADM.CODE, TITLE 24, 2-5351 AND 2-5352, AND AMENDMENTS TO THE ADMINISTRATIVE STANDARDS FOR ENERGY BUILDING REGULATIONS (CAL.ADM.CODE, TITLE 20, 1401, et seq.)

Docket No. 82-RBS-1

1516 Ninth Street

Hearing Room

Sacramento, California

Wednesday, February 9, 1983

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Reported by:

Amber Whitsett

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Sacramento, California 95818

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COMMISSIONERS PRESENT

1
2 Russell Schweickart, Chairman

3 Arturo Gandara, Commissioner

4 Karen Edson, Commissioner

5 Geoffrey Commons, Commissioner

STAFF PRESENT

6
7 John Geesman, Executive Director

8 Bill Chamberlain

9 Richard Ratliff

10 Bart Gauger

11 Hyman Meyer

12 Bill Huston

13 Jonathan Blee

14 Gary Heath, Public Adviser's Office

15 Kathy Oxley, Secretary

ALSO APPEARING

16
17 Earl Ruby, CBIA

18 Gerald Steel, Energy Consultant and Registered Engineer

19 Phil Vermeulen, SMACNA

20 Bob Raymer, CBIA

21 Don Collin, CBIA

22 Doris Specht, City of Stockton

23 Charles Eley, CCAIA

24 Judy Tretheway, Insulating Window Treatment Devices

25 L. D. Donoho, Thermal Energy Conservation

ALSO APPEARING (CONTINUED)

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- Robert Ladine, RC Systems
- Phillip Caesar, Solar Energy Consultants, CALSEIA
- Anoosh Mizany, Solar Depot, CALSEIA
- George Hannah, Southern California Gas Company
- Gordy DeNecochea, Office of Migrant Services

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1 by the Committee in how finally then to present to the
2 Commission for a vote the package of amendments. It would
3 seem to me that we have potentially three subpackages,
4 those which can be voted on today, finally, let me say,
5 and included in the submission to the Building Standards
6 Commission.

7 Those which may be -- may require a 15-day notice
8 before final action by the Commission, before submission to
9 the Building Standards Commission, and potentially those
10 which would require a 45-day -- amendments which may require
11 a 45-day renotification and proceeding before final action
12 and submission to the Building Standards Commission.

13 In the end, I think I would like to hear first from
14 the Presiding Member of the Committee on what he would
15 propose for Commission action and, of course, each of us will
16 have to consider the various benefits and risks of the group-
17 ing of these -- of these various elements. If that's as
18 clear as mud, I would then like to turn to Commissioner
19 Gandara for opening remarks before we begin taking public
20 comment on the individual items.

21 Because of the fact that I have a list of, let me
22 say a nonspecific list of people who care to address the
23 Commission on Item 5, I will instead simply call on a show-
24 ing of hands on an element-by-element basis for those of
25 you who are to be found in this pile.

1 COMMISSIONER GANDARA? Okay. Mr. Chairman, I
2 would call your attention to one thing. Of course, you have
3 the Committee report and, as I stated in the beginning, the
4 Committee report covers all the substantive changes that are
5 being recommended by the Committee to the Commission.

6 You should also have in your package the actual
7 language proposed for adoption, and the language proposed
8 for adoption does include some items that in the Committee's
9 judgment were not of a substantial nature, but that perhaps
10 some participants wish to address.

11 Nonetheless, I would recommend that you proceed
12 in the following way. One, that you take the Committee
13 report and that you hear comments according to each section
14 that is discussed in the report. At the end, if there is a
15 section in the proposed language that has not been covered,
16 then receive those comments at that time.

17 With that, let me just also indicate that we have
18 both the staff and counsel here still with us, and that in
19 some elements here counsel worked -- had principal responsi-
20 bility in some other element, and staff had the principal
21 responsibility in responding to the Committee's request, so
22 that where appropriate one or the other might best comment
23 to the Committee.

24 I think that in view of the interest here and in view
25 of the comments made earlier with respect to whether there

1 would be an adequate time for you -- it might be appro-
2 priate to just call on counsel or staff as we proceed on
3 each section to give us just a brief one-minute overview
4 of the change and the purpose for that change, and then
5 proceed with the comments, if that would -- if it sounds
6 agreeable to you.

7 CHAIRMAN SCHWEICKART: All right. Let me try to
8 play that back and make sure I understand your recommenda-
9 tion.

10 Basically, you are recommending a modification of
11 what I just proposed to follow the order or the groupings
12 in the Committee report, rather than the direct language
13 changes to the -- to Title 24.

14 I certainly have no problem with that recommenda-
15 tion. Where it is not clear, however, I would like to ask
16 if whoever provides the overview, and which I'll defer to
17 you, whether staff or Committee counsel, that the specific
18 sections in the language of the regulations be identified
19 at the outset, so that we can insure that we've actually
20 covered everything which we have proposed language for, and
21 don't have something drop between the cracks. That's my
22 only concern there.

23 COMMISSIONER GANDARA: Okay. Well, then, to
24 address that concern, why don't we just proceed with the
25 proposed language, okay, and you have the Committee report

1 to follow, as discussed. I have no objection to that. I
2 thought it was one and the same thing, but it makes no
3 difference to me. Let's do that.

4 CHAIRMAN SCHWEICKART: Commissioner Commons?

5 COMMISSIONER COMMONS: Since there's so many
6 changes, and you said some of them are noncontroversial,
7 would it be possible to take the five, ten or fifteen that
8 are noncontroversial and lump them together, in the interest
9 of time?

10 COMMISSIONER GANDARA: Well, that's my -- it was my
11 previous suggestion, but, you know, the Chairman has the
12 preference to proceed in order, and that's fine. That's
13 fine by me, as well.

14 CHAIRMAN SCHWEICKART: Well --

15 COMMISSIONER GANDARA: It makes no difference to
16 me.

17 CHAIRMAN SCHWEICKART: Again, I think I would just
18 ask for a show of hands at the outset on each section
19 whether there is any public comment. If there is no public
20 comment on that section I would consider it, then, by
21 definition to be noncontroversial, and that the Committee
22 recommendation would lie before us.

23 COMMISSIONER GANDARA: Okay. Sounds fine.

24 COMMISSIONER COMMONS: Now, I think that's
25 probably the easiest way to go.

1 In that sense, then, I would -- I would certainly
2 recommend that those of you who are here to address the
3 Commission on specific items make sure that you're ahead of
4 us in what it is you want to address so that we don't end
5 up going back over things, because you only realized it
6 late.

7 So we'll start out, then, with Section 2-5301(a)2,
8 and are there any -- is there public comment on that?

9 Yes. Mr. Ruby.

10 Well, I'm sorry. All right. Yes, that then will
11 be addressed, and again would you like Committee counsel,
12 Commissioner Gandara, to give a --

13 COMMISSIONER GANDARA: Yes. Mr. Ratliff had the
14 responsibility for the three changes in this section, so we
15 could go over them briefly.

16 CHAIRMAN SCHWEICKART: All right.

17 MR. RUBY: In the interest of time, Commissioner,
18 my correction is only grammatical.

19 COMMISSIONER GANDARA: Okay.

20 CHAIRMAN SCHWEICKART: All right. Why don't we
21 go ahead, then. What's your --

22 MR. RUBY: In subparagraph (e), I believe we
23 should state "where actual site preparation and construc-
24 tion have commenced."

25 CHAIRMAN SCHWEICKART: All right. I would agree.

1 That's definitely grammatical.

2 MR. RUBY: That's as grammatical as you can get.

3 CHAIRMAN SCHWEICKART: Thank you, Mr. Ruby.

4 Is there any other comment for the Commission
5 on 5301(a)2?

6 All right. Fine. 5301(c)3.

7 MR. RATLIFF: Before we move on, I know that the
8 Office of Migrant Services has attended this hearing to
9 answer any questions or perhaps to make a statement with
10 regard to 5301(a)2, the exception to (c), which would
11 basically exempt seasonally-occupied farm worker housing
12 from Section --

13 CHAIRMAN SCHWEICKART: Are they here, Mr. Ratliff?

14 MR. RATLIFF: Yes.

15 CHAIRMAN SCHWEICKART: And do they desire to
16 address the Commission, or are you happy with the language?

17 MR. DeNECOCHEA: No, I'm happy with the
18 language, unless you people have some questions.

19 CHAIRMAN SCHWEICKART: Fine. No questions.

20 All right. Let's move on. 5301(c)3. Again,
21 I'll -- Mr. Ratliff, I'll basically defer to you, unless --
22 are there any that you prefer staff to run the overview,
23 Commissioner Gandara?

24 COMMISSIONER GANDARA: I'm looking at it. I
25 believe that this is one of those editorial in nature that --

1 MR. GAUGER: This actually allows --

2 COMMISSIONER GANDARA: That's right. This is
3 5301 -- there's a misprint that appears on page 4 of the
4 Committee Report. That 5301(a)3 should be 5301(c)3.

5 And staff -- staff can comment.

6 MR. GAUGER: This is a clarifying language which
7 basically puts into the standards a practice which staff
8 and designers and builders have been doing right along.
9 It allows, in an addition situation, for a person to take
10 credit to things he does to the existing part of the struc-
11 ture when he calculates the energy use in the addition. The
12 basic concept is to allow that trade-off between the exist-
13 ing and the new addition.

14 COMMISSIONER GANDARA: I'd be surprised if there
15 were any comments on this.

16 CHAIRMAN SCHWEICKART: Was there any comment on
17 this section of the standards?

18 I think the only question I had was do we have
19 any input on this from building officials who would pre-
20 sumably have to certify, and I imagine will issue permits
21 on additions, rather than the permit on the full house, so
22 how is a building official to essentially reaccount for
23 the entire house?

24 MR. GAUGER: There's a procedure in the design
25 manual which explains the -- how to do this, and it's not

1 a new procedure for the building officials. They're
2 allowed to do it under the old standards, so --

3 CHAIRMAN SCHWEICKART: I see. This is essentially
4 an extension of past practice, then --

5 MR. GAUGER: Correct.

6 CHAIRMAN SCHWEICKART: -- to include the rest of
7 the house in meeting the intent of the standards.

8 MR. GAUGER: That's correct.

9 CHAIRMAN SCHWEICKART: All right.

10 All right. So, then, 5301(c)3 is in the non-
11 controversial category.

12 5302 --

13 COMMISSIONER GANDARA: That's the conforming
14 amendment to the first one, which was the CBIA request.

15 CHAIRMAN SCHWEICKART: Is there any comment?

16 Yes. Mr. Ruby.

17 MR. RUBY: We've reviewed the Committee report and
18 explanation of this paragraph. To our knowledge, the term
19 "Foundation Permit" does not -- either does not exist or
20 is really not in normal usage in housing construction. Our
21 legislative -- or our legal staff is over at the Law Library
22 trying to research this a little bit.

23 I would like to be able to comment on this a bit
24 later when Mr. Collin returns.

25 COMMISSIONER GANDARA: Mr. Ratliff, I thought this

1 was an item that we -- I thought it was your language, to
2 be frank with you, but apparently not.

3 MR. RATLIFF: Yes. The language that is here is
4 language that was in the old Part 6 standards. In other
5 words, it was formerly found in both the nonresidential
6 building standards and the residential building standards
7 prior to their movement into Part 2 in the State Building
8 Code.

9 My understanding is that a foundation permit is
10 a permit which is given to actually start excavation of the
11 site. I don't know if -- if other authorities may call this
12 permit by a different name, but so far the change is one
13 which merely adds back into our regulations a definition
14 which we formerly already had, and which was found to be
15 quite workable, according to a memorandum that I read in
16 our old files.

17 CHAIRMAN SCHWEICKART: Mr. Ruby is now joined by
18 Mr. Collin, who has a report from the State Library.

19 MR. COLLIN: Mr. Chairman, and members of the
20 Commission, Don Collin, representing the California Building
21 Industry Association.

22 Obviously what you're having to wrestle with at
23 this moment is the fact that in the statute you can find
24 points where there are three areas of relief from -- from
25 new energy standards in the course of buildings that are

1 in some stage of production.

2 It's interesting to note that they were all put
3 in at different times, and kind of came around in sets of
4 different circumstances, but the ones I refer to, of
5 course, is the last sentence that's in 2-5402(a), which is
6 the one that refers to the fact that the standards appli-
7 cable at the time the application for the building permit
8 is applied for, so that under the prior law you were at
9 risk if the standards changed between the time you applied
10 for a permit and when it was issued, because the prior
11 language referred to issuance, and your prior regulation
12 referred to issued.

13 Another exemption is found at 2-5402.1(g). That's
14 the one where they have to come and ask for an exemption
15 from the Commission, and that's based on the fact that
16 there are a lot -- there have been some soft costs, planning,
17 engineering, and things like that, that have been expended
18 prior to the time of your adoption of standards, and then,
19 of course, there is the Section 2-5402.1(f) which refers
20 to the reference that it would not be applicable to build-
21 ings where the site preparation and construction had com-
22 menced prior to the effective date, so even the dates of
23 the various exemptions are not quite in sinc, and they talk
24 about different sets of circumstances.

25 I noted in the Committee report the reference to

1 the fact that the reference to site -- actual site prepara-
2 tion and construction had an antecedent position in your
3 1978 -- your 1978 regulation, and that language, however,
4 also can be found going back into a 1973-74 statute, and
5 that was when the Legislature had proposed -- excuse me --
6 had enacted legislation then giving the Commission on
7 Housing and Community Development the obligation to produce
8 energy insulation standards for new residential structures.
9 That language appears there, and that was the only exemption
10 that was applied.

11 In other words, they didn't refer to -- to the
12 idea of how far you'd gotten along in terms of the planning
13 process, soft costs, or into your building department. It
14 simply said that the -- that it would not operate -- the
15 new insulation standards would not operate with respect to
16 buildings that were -- on which site preparation and con-
17 struction had begun.

18 I notice that -- one thing that was kind of
19 interesting in looking at the history of your own statutory
20 provisions, that in the '78 adoption of your regulations,
21 you had two exemptions. One exemption was for the fact
22 that if a building permit had been issued the standards
23 would not be applicable.

24 And then secondly, the reference to the matter of
25 the site preparation and construction was one that was --

1 you had to apply to the Commission for, and at that time
2 they defined site preparation and construction as any con-
3 struction activity undertaken pursuant to the foundation
4 permit or building permit, so that's where that language --
5 that's the antecedents of that language.

6 But that was -- that was an exemption that they
7 had to come to the Commission to obtain.

8 Then, of course, the statutes were amended in a
9 series of provisions in which it would -- you changed the
10 process of the exemption as it related to the Commission,
11 and in the seven -- in 1316, which I think was a -- was a
12 1977 statute, was where they dropped -- they created the
13 provision of Section (g), so you now come to the Commission
14 for the -- for the exemption because of -- I call them soft
15 costs, engineering, design, and things like that, prior to
16 adoption, and codified again this provision with respect to
17 site preparation and construction.

18 But no longer was it one that had to come to the
19 Commission -- that you had to come to the Commission on, so
20 it stood now as kind of an independent statutory exemption
21 in the code.

22 So that's -- then later, in the following year,
23 402 -- 2-5402(a) was amended, and the provision moving up
24 the building permit exemption from issuance to the time of
25 application was applied, so we looked at -- you know, that's

1 kind of just the history. Maybe your counsel had already
2 gone over that. I apologize if I covered matters that may
3 already be on the oral record.

4 But what happened, of course, is that we started
5 to look at the reference in this context of these three exemp-
6 tions that are now in the permanent statutes, and looked again
7 at this idea that actual site preparation and construction
8 had to be in reliance on a foundation or a building permit,
9 and, of course, all of a sudden it doesn't -- it looks as
10 if the effort is to try to undo 2-5402(a), because if you
11 are already exempt by having applied for a building permit,
12 you would obviously be exempted if you were already under-
13 taking construction for a building permit for some parti-
14 cular building.

15 So, consequently, it would -- it would appear that
16 that language would now be designed to literally wipe out
17 and overtake an exemption you already have, so, therefore,
18 it would be a nullity of the -- of the statutory provisions,
19 which we wouldn't -- would not think think would be a proper
20 administrative interpretation of the legislative enactment.
21 And so -- and the foundation permit, as I heard being dis-
22 cussed as I came in, is -- is certainly a phrase that, in
23 the residential area, and we're dealing with the residential
24 focus here -- the residential area is one that's basically
25 unknown.

1 So if you look at the statutory provisions, it
2 would appear to us that the proper interpretation would mean
3 that where actual site preparation of the site and con-
4 struction on that some sort of man-made activity, which
5 would be they have to start putting in curbs, gutters,
6 sidewalks, trenching, putting in pipes, the underground
7 utilities, and things like that, is the only thing that
8 makes sense in the context of trying to work out some
9 rational basis of what 2-5402(a) means, 2-5402.1(g) means,
10 and now 2-5402.1(f) would mean, and that's the focus of it.
11 It just seems that the proposal before you would simply
12 mean that, to make the (f) subdivision applicable, you
13 already would have been -- you already would have been
14 covered by some other device, and so in effect it nulli-
15 fies.

16 COMMISSIONER GANDARA: Let me indicate that --
17 while I appreciate Mr. Collin's comments, I'm totally con-
18 fused now.

19 Let me give the Commission a history of how this
20 started. We have the provision in Title 20, 1408(a)(1),
21 which had been requested by CBIA as posing some problems
22 -- some interpretation problems.

23 As a result, the Committee intent was to eliminate
24 that section. However, CBIA then -- their position then was
25 that there needed to be some express clarification, as the

1 Committee report indicates, though we didn't feel it to be
2 necessary. There was a request that we add the section
3 2-5301(a)2.E., and once having done that, then there became
4 a necessity to define what actual site preparation con-
5 struction was, and the proposal at the time, and, you know,
6 to the best of my memory, Mr. Ruby agreed to put in the
7 previous definition of what that was, which the Committee
8 was advised that it inadvertently left out during the
9 previous proceeding.

10 So that's all we've done here. We've taken out
11 the area where it appeared there was a problem being posed.
12 We've added in what was requested to be added in, and we've
13 added the definition.

14 So I guess the question I have for Mr. Collin at
15 this point in time, since clearly we didn't hear from him
16 then -- we heard from Mr. Ruby -- is what is the recommen-
17 dation?

18 MR. COLLIN: Well, the recommendation would be to
19 delete 2-5302. There's no problem with respect to -- to
20 2-5301(a)2.E., as it does reflect the statutory provisions.

21 CHAIRMAN SCHWEICKART: Mr. Collin --

22 MR. COLLIN: The problem is that --

23 CHAIRMAN SCHWEICKART: If you'll pardon me, that
24 doesn't make any sense at all to me. What you're recommending
25 is that we retain 2-5301(a)2.E., which uses a term called

1 "preparation and construction," site preparation and con-
2 struction, and yet you're proposing that we delete the
3 definition of that term.

4 MR. COLLIN: Well, the alternative would be to
5 redefine it in a more logical fashion so that you give --
6 give operational effect to the three exemptions.

7 CHAIRMAN SCHWEICKART: Well, are you recommending
8 that we not define it?

9 MR. COLLIN: Well, one would be that, because as
10 a practical matter the -- this matter is now handled at the
11 local level.

12 See, prior to this, you defined it because people
13 came to you to get the exemption. That's what your old
14 provisions provided for, so you needed a definition then
15 if you wanted to have a -- to make this operative, because
16 you administered that exemption.

17 CHAIRMAN SCHWEICKART: All right. But, look --

18 MR. COLLIN: And secondly --

19 CHAIRMAN SCHWEICKART: Mr. Collin, pardon me. We
20 will undoubtedly be queried by local officials --

21 MR. COLLIN: Correct.

22 CHAIRMAN SCHWEICKART: -- when they come to apply,
23 on how does the Commission interpret this -- this issue of
24 do they or -- does a builder or does he not need to comply
25 with some change in the standard that --

1 MR. COLLIN: All right.

2 CHAIRMAN SCHWEICKART: -- that may come about at
3 any time, and they will certainly want guidance from the
4 Commission if it is not included in -- in definition.

5 MR. COLLIN: All right. If you were to choose
6 to give them guidance, then our recommendation would be that
7 they would -- you would deal with -- with a form of per-
8 mission that would be given to the -- to the builder that
9 specified a site, specified an area in which preparation
10 would be going on, which we would contend would include
11 grading, and construction, which would be -- there would
12 have to be the beginning of some man-made activity on that
13 site, which is -- because in dealing with the practical
14 problems of today, you're dealing with production builders
15 of residential homes, and those are done, as you know, in
16 tracts, and those -- and subdivision maps are filed, and so
17 these areas are definable.

18 So that you can define the area where they have --
19 that they are preparing at the time, which would be the
20 operative data of the -- of the regulations, your energy
21 regulations, and they would have to show what construction
22 they had actually begun on that site. But that would be --
23 that would be the nature of the suggested area that we
24 would provide to you.

25 CHAIRMAN SCHWEICKART: All right. So --

1 COMMISSIONER GANDARA: In the --

2 CHAIRMAN SCHWEICKART: Go ahead. Excuse me.

3 COMMISSIONER GANDARA: I was about to say that
4 the Committee's intent, and certainly the Committee's under-
5 standing of this, is that there was a -- certainly a pre-
6 vious understanding of what a foundation or building permit
7 was, and that that understanding has not been changed, and
8 when counsel recommended to the Committee that we return to
9 that definition, which apparently was not in issue then but
10 was simply a question of inadvertence, then that certainly
11 seemed agreeable to the Committee in responding to CBIA's
12 request.

13 Now, if the issue is that the meaning of a foun-
14 dation or building permit has changed, then I think it's
15 certainly something that deserves some more attention, but
16 the extent that -- my understanding is that what it meant
17 then is what we intend it to mean now, and that that was
18 being interpreted then, and the interpretation should be
19 the same.

20 Mr. Ratliff, do you -- can you provide any greater
21 illumination on this?

22 MR. RATLIFF: Well, I think there are a couple
23 of things that ought to be added.

24 In the first instance, the definition that we're
25 proposing here is the same as the definition which was

1 adopted in 1978 for the -- or adopted in 1977 and became
2 effective in '78, for the residential building standards.
3 At least checking the compliance files and the enforcement
4 files, I found no indication that there was ever any -- any
5 doubt or trouble with that particular definition, and that
6 definition then was in effect subsequent to the legislative
7 changes that Mr. Collin has discussed.

8 Secondarily, I think the proposal that we're hear-
9 ing would be one that would invite abuse, because there
10 would be -- it would be very difficult for a building
11 official to determine what constituted the kind of activity
12 which would entitle a builder to exemption from new stan-
13 dards.

14 By requiring a kind of a permit or activity per-
15 son to a given permit, I think it would be much easier for
16 a building official to determine what in fact constituted
17 activity that entitled the builder to an exemption. If a
18 builder, for instance, claimed that he was entitled to an
19 exemption based on the clearing of land 20 years ago, that
20 obviously would not fulfill the requirements of the exemp-
21 tion I think that we contemplate.

22 Finally, I think that this particular requirement
23 has a rational basis, in that, according to what I've read,
24 a foundation permit requires the delineation or configura-
25 tion of the building planned, as opposed to a grading permit

1 which does not.

2 Until there is some plan, some configuration for
3 that building, there is no increased cost to complying with
4 our building standards. Therefore, I don't think it would
5 be a good recommendation to base the exemption on the grad-
6 ing permit or some earlier activity as yet not defined, so
7 for those reasons I -- I don't think that the suggested
8 amendment would be very helpful.

9 CHAIRMAN SCHWEICKART: Commissioner Commons?

10 COMMISSIONER COMMONS: Well, I think we do have
11 some language problems here. First, we probably shouldn't
12 -- we use site preparation and construction. We probably
13 shouldn't use "foundation" before "building permit," because
14 site preparation occurs prior to your -- to your founda-
15 tion.

16 You also may have reliance upon a foundation and
17 have done some construction, but it's nonrelated, and you
18 have not yet received a building permit, and so I'm not
19 sure of the relevance of the foundation.

20 Many times grading, if you're talking about hill-
21 side areas, can be as much as 25 percent of the overall cost,
22 so a grading permit can actually be the more difficult per-
23 mit to obtain.

24 I don't understand the reason, if we're talking
25 about site preparation and construction, why we even have

1 the word "foundation," or it should be "building permit and
2 foundation," but to have it the way it is I think creates
3 situations where you would have inequities.

4 MR. RATLIFF: One additional point that I might
5 add is that we added in subsection E. to 5301 at the request
6 of CBIA, and at the January 4th hearing informed those
7 present, including CBIA, of the definition that we intended
8 for that particular phrase, and only on this date are we
9 receiving comment on it, so it's a little surprising.

10 CHAIRMAN SCHWEICKART: Let me ask a question here.
11 It seems to me we're caught between a couple of things. I
12 think the intent of the Commission or the Committee is clear
13 in bringing this to the Commission. We may have multiple
14 references here which are getting in our way in terms of
15 reaching an acceptable resolution, which are unnecessary.

16 Let me suggest the -- returning to 2-5301(a)2.E.,
17 and inquire of the Committee whether or not a shift of word-
18 ing there, "New buildings need not comply with changes in
19 this chapter where foundation or building permits have been
20 obtained prior to the effective date of such changes."

21 COMMISSIONER GANDARA: Mr. Chairman, let me
22 express what the Committee's intent was again in this
23 language.

24 The proposal by CBIA to clarify this issue was
25 acceptable to the Committee. I think there was a desire on

1 all parties to do that. Okay. So, first of all, we're
2 agreed on that.

3 The second issue was how to do that, and the
4 Committee's intent was basically not to add to the prolifera-
5 tion of definitions of -- of permits of various types. One
6 of the things that certainly the Committee has learned about
7 is that there is substantial variation in what those permits
8 are.

9 I think the Committee has been assisted greatly
10 by Mr. Ruby and CBIA in bringing that to the attention of
11 the Committee and, frankly, I -- I believe that there is
12 certainly an expertise there that cannot be duplicated by
13 the Committee, but the Committee relied upon the relevance
14 of this issue, so I really take the comments with great
15 weight.

16 On the other hand, because the Committee did not
17 wish to add language of its own, proliferate language, and
18 have yet another term that would be in conflict, the
19 Committee opted just to return to the language that had
20 been enforced before.

21 It was the Committee's expectation that that
22 language had been in use, had been to some extent within
23 the knowledge of building officials and CBIA, and within the
24 knowledge of the Commission, so that there was a meaning
25 attached to that.

1 Now, it was the Committee's further understanding
2 that that meaning was probably of a wider-spread concensus
3 than would be achieved by a forging of a new element, and
4 for that reason we took basically as a body the previous
5 language in the definition, and the intent of the
6 Committee certainly was the concept that Mr. Ratliff has
7 described, that where -- that up to the time that the foun-
8 dation permit is there, that it certainly still permits a
9 substantial flexibility. So --

10 CHAIRMAN SCHWEICKART: I have not suggested any-
11 thing different from what the Committee intends, nor intro-
12 duced a new term.

13 What I am suggesting is -- and in listening to
14 Mr. Collin what I am hearing is that the term of art "site
15 preparation and construction" is used not only in 53 -- in
16 2-5301(a)2.E., but in several other locations where this
17 definition may not apply, so that rather than put a large
18 blanket by a definition here to things which the Committee
19 has no concern about, that we take the definitional language
20 which is proposed, which I think we all agree upon, and put
21 it directly into 2-5301(a)2.E.

22 I'm using the same terms that you're proposing in
23 the definition, namely --

24 COMMISSIONER GANDARA: Okay.

25 CHAIRMAN SCHWEICKART: -- the -- having obtained

1 a foundation or building permit, and substituting that in
2 place of the words "site preparation and construction."

3 COMMISSIONER GANDARA: Let me see if -- if the
4 following proposal is what you mean, so that E. would read,
5 "New buildings need not comply with changes in this chapter
6 where any construction activity undertaken relies upon a
7 foundation or building permit has commenced prior to the
8 effective date of such changes"?

9 CHAIRMAN SCHWEICKART: Yes, sir. That's what I
10 said.

11 COMMISSIONER GANDARA: I have no problems with
12 that.

13 COMMISSIONER COMMONS: I would oppose that change.

14 COMMISSIONER GANDARA: I'm not quite certain
15 whether CBIA's issue is resolved here, though, but certainly
16 all that does is move the definition in.

17 CHAIRMAN SCHWEICKART: Right. That's -- what I'm
18 saying is make a small blanket out of a big one so that we
19 don't get in trouble with other uses of the term of art.

20 COMMISSIONER GANDARA: I have no objection to that.

21 CHAIRMAN SCHWEICKART: Mr. Collin?

22 MR. COLLIN: Mr. Chairman, I would think that
23 language, as you've proposed it, would be unnecessary. The
24 reason is that, if you've already gotten a permit and had
25 the construction going, I think it's clear under the -- that

1 exemption already exists in the law. You don't need to
2 create a regulation to do that, because you're going to be
3 -- the way the statutes now read, there are exempted build-
4 ings that aren't even under construction, but where the
5 building application permit has been applied for.

6 MR. RATLIFF: May I respond to that?

7 MR. COLLIN: If I understand what you're doing,
8 I think you're covering an area that's already covered.

9 Now, let me get to a second point, however, that
10 if your -- if your intent in that change is not to suggest
11 what Section 2-5402.1(f) means, then that's quite a dif-
12 ferent story, though I suspect now there's going to be a
13 lot of confusion between using the language for regulatory
14 purpose in one sense, and suggesting that it's not available
15 for another sense.

16 My reaction would be, as we've discussed different
17 language, would be that site -- if you look at the proposed
18 definition, we would talk about construction activity under-
19 taken in reliance upon a governmental approval, since we
20 know that the word "permit" creates a lot of problems. I
21 think you'll find that that deals with the problems of all
22 -- of the various ways in which local governments handle
23 matters at the local level, and I must indicate that one
24 reason why some of these things have gotten more complicated
25 is that there was a time in the statutes where the process

1 of issuing building permits were all laid out in what was
2 then called the State Housing Act, and all that stuff has
3 been abolished.

4 So, consequently, the way in which local govern-
5 ment now operates in this area has grown up by kind of
6 local custom and practice, but this would -- my proposal
7 then would clearly indicate -- would keep the reliance
8 aspect, would indicate that there would be a form of
9 governmental approval so the Government knows that these
10 people are operating with some sort of permission, and
11 whether or not they have actually undertaken to do the two
12 things, site preparation and construction, would be sus-
13 ceptible to identification, and that's why construction is
14 in there, and we don't object to the word "construction,"
15 because it's in the statute, so you're not dealing with
16 just simply ancient grading.

17 CHAIRMAN SCHWEICKART: Okay. Let --

18 MR. COLLIN: I also would suggest that the idea
19 that you were dealing with foundation permit, so that there
20 is a confirmation of a foundation out there, as it relates
21 to cost, there's two problems I think in that -- that sug-
22 gestion of rationale.

23 One is that to be able to turn houses to maximize
24 the opportunities to take care of the various packages under
25 your standards is in large measure a function of the size

1 of the lot. If you've got a lot that's there and it's only
2 so wide, you can't turn houses around on them because they
3 are not -- the lots are not that wide, particularly if
4 we're getting good -- good destinies and uses in urban
5 areas.

6 And I think secondly the matter of cost is not
7 an issue, because it's not a part of the statutory provi-
8 sion. It's a part of the provision of subdivision (g),
9 when somebody comes to you for an exemption. It's not a
10 part of subdivision (f)'s exemption.

11 CHAIRMAN SCHWEICKART: Commissioner Commons?

12 COMMISSIONER COMMONS: I would think that
13 Commissioner Schweichart's proposed change is a substantive
14 change and would require notice.

15 In site preparation and construction, "construc-
16 tion" can be construction of off-sites. A builder may not at
17 this time have obtained for his building or foundation per-
18 mits, and may have expended substantial funds, including
19 going through architectural costs at the time, and if we
20 were to change that, that that would there would be possibly
21 substantial buildings where there have been funds expended
22 or developments -- where there has been substantial funds
23 expended which would come under the province of the proposed
24 change, which would not have come under it given the cur-
25 rent language in 2-5301(a)2.E.

1 I still think, based on the same factors, the
2 purpose of having the exception is where people have done
3 actual site preparation and construction, and that that
4 often is done prior to the time that you have obtained your
5 foundation or building permit in the orderly process of
6 construction, that the use of the word "foundation" or
7 "building permit" is not correct.

8 I don't think I would go so far as to say
9 governmental approval, because that also is vague, and you
10 can have -- governmental approval could be, for example,
11 the granting of zoning or the -- granting of zoning would
12 be a governmental approval, so I think we would need to be
13 more specific than the use of "governmental approval."

14 I would be closer to accepting your "off-site or
15 building permits" than to "foundation or building permits."
16 I think the key -- the key point is somewhere -- and it can
17 be arguable if it's between your grading permit or your
18 off-site permit, and it's in that area, that could be --
19 that could be debated.

20 But it certainly is not your foundation. You're
21 locked into your project before you get your foundation
22 permit.

23 MR. RATLIFF: Commissioner, if I could add, I
24 think -- I think that Mr. Collin is identifying a distinction
25 which is not real, and that is he's saying, well, building

1 permits are already -- if you have your building permit,
2 you're already exempt from Section 2-5402(a), and that's
3 statutory, but I just want to point out that if -- if in
4 fact you've already begun actual site development and con-
5 struction, that's also statutory. There's no distinction
6 there.

7 What we have to do is determine at what point it
8 makes sense to provide an exemption for that kind of -- for
9 some kind of activity, and I would submit that it makes a
10 lot more sense to condition that on some kind of activity
11 which identifies the configuration of the building involved,
12 and not one such as Mr. Collin has suggested, which might
13 require only a zoning permit or a variance.

14 MR. COLLIN: Well, Mr. Chairman, excuse me.

15 CHAIRMAN SCHWEICKART: Yes, Mr. Collin.

16 MR. COLLIN: There's no way in my view, and it is
17 not my suggestion, that mere zoning would make this appli-
18 cable, because -- and I'll defer to other language, but I
19 don't think you can undertake construction just because you
20 have zoning. You still have to get some sort of governmen-
21 tal approval.

22 It isn't the minimal governmental approval. I'm
23 not talking about the first governmental approval. I'm
24 talking about some governmental approval that would relate
25 to the activity of site preparation and construction. It

1 would have to relate to that.

2 CHAIRMAN SCHWEICKART: All right. We're waving
3 around in the dark here. Do you have a specific -- some
4 specific language, Mr. Collin, which you would like the
5 Commission to consider which meets what you see either as
6 the intent of CBIA or the intent of the Commission?

7 MR. COLLIN: Well, I -- I would repropose the idea
8 that "foundation or building permit" be substituted with
9 "governmental approval."

10 Now, if we want --

11 CHAIRMAN SCHWEICKART: Okay. I --

12 MR. COLLIN: That would be --

13 CHAIRMAN SCHWEICKART: Let me say that we can take
14 the sentence to the Commission, but certainly, speaking for
15 myself, the term "governmental approval" is far too non-
16 specific to apply to these regulations.

17 Now, I don't know if the rest of the Commission
18 feels the same way, but I would certainly myself welcome
19 something more specific.

20 MR. COLLIN: All right.

21 COMMISSIONER GANDARA: I might suggest something
22 to the Commission so we can perhaps proceed to some other
23 issue.

24 As I mentioned earlier, there are three changes,
25 all of which are related. The change to Title 20, the change

1 to 2-5301, and the change to 2-5302. It was the Committee's
2 intent to satisfy CBIA's request. It was the Committee's
3 understanding that it had.

4 We're at the point where I think that we either
5 leave the existing language the way it was, or that we
6 adopt these three conforming amendments the way they are
7 presented.

8 If the -- if the present clarification does not
9 apparently meet, you know, now what is CBIA's concerns,
10 then I think the way we can resolve this is just go back
11 to what we had, and we are not going to forge language here
12 right now, and I frankly am very concerned about introducing
13 new terms of art in this area which, as I mentioned before,
14 there's a great multiplicity, and we'll be pondering, you
15 know, for many years as to what we meant then, if somebody
16 else has a different use for that term.

17 COMMISSIONER COMMONS: What was 5302 before? I
18 don't remember.

19 COMMISSIONER GANDARA: There was no 2-5302, and
20 there was no Section E. of 2-5301(a)2. The only thing we
21 had before was in the Title 20 Administrative Regs, which
22 is 1408(a)(1). Okay? So I'm proposing that we move ahead
23 by either saying we'll have no change at all in this section,
24 we'll leave 1408(a)(1) the way we had it, or we'll go with
25 the three conforming amendments which are all, you know,

1 interrelated.

2 COMMISSIONER COMMONS: I have no problem with
3 2-5301E., and I would not object to deleting 5302.

4 COMMISSIONER EDSON: Well, I would be inclined to
5 first hear from some building officials, if there are any
6 here today. I would be interested in their comments about
7 the enforceability of the language, as proposed by CBIA,
8 and in the event we are unable to reach consensus I would
9 agree with the Committee that the best thing to do would
10 be to simply delete any changes related to it and invite
11 CBIA to petition us for the specific language that they
12 can develop in I think a less pressured form.

13 I don't -- I certainly don't have any problem
14 clarifying the exemption, and I'm sympathetic to the con-
15 cern about the foundation permit, and whether it's actually
16 issued by all jurisdictions and whether or not that's really
17 the best point at which to trigger an exemption, but I am
18 reluctant to --

19 CHAIRMAN SCHWEICKART: Do we have a representative
20 from CALBO present?

21 Would you care to comment on this issue?

22 MS. SPECHT: I'll try.

23 CHAIRMAN SCHWEICKART: Mr. Collin, why don't you
24 stay there. I think we can take -- all right.

25 MS. SPECHT: I came in a little bit late, so I

1 don't quite understand --

2 CHAIRMAN SCHWEICKART: Excuse me. Could you state
3 your name for the record?

4 MS. SPECHT: Oh, I'm sorry. I'm Doris Specht from
5 the City of Stockton, and I am not representing CALBO, but
6 I -- I guess I'm the only person from a building department
7 here.

8 I'm not quite sure of the language that's pro-
9 posed by CBIA. Could somebody read that for me?

10 (The Commissioners conferred among themselves.)

11 MS. SPECHT: Okay. It depends on the jurisdiction
12 that you're dealing with. In some jurisdictions, like my
13 jurisdiction, we do not have a grading permit per se, but
14 as Mr. Commons --

15 CHAIRMAN SCHWEICKART: I think the term that we
16 are concerned with is the term "foundation permit."

17 MS. SPECHT: Okay. I would think a person would
18 have spent a lot of money on the property prior --

19 CHAIRMAN SCHWEICKART: Again, I -- I'm sorry. Let
20 me -- let me try and clarify.

21 The issue immediately before us, if I can separate
22 it, is does the term "foundation permit" have meaning.

23 MS. SPECHT: Yes, it does.

24 CHAIRMAN SCHWEICKART: All right. Now, the --

25 MS. SPECHT: To what?

1 COMMISSIONER EDSON: Do you think it has meaning
2 generally to all local jurisdiction?

3 MS. SPECHT: Yes.

4 CHAIRMAN SCHWEICKART: All right. Then there is
5 another issue which is Mr. Collin's issue or CBIA's issue,
6 or whoever's issue, which gets into how much money may be
7 spent prior to such a thing, but again I would take that
8 the sense of the Committee, at least as I understand it,
9 and certainly my sense in knowing the history of this, is
10 not how much money was spent on grading or on clearing
11 trees, or in putting in sewers, or whatever, but do speci-
12 fic measures required in terms of meeting the energy
13 efficiency in the building to go on that property apply or
14 not apply to what will be constructed there, depending on
15 what -- what the entry conditions are, namely, the existence
16 of the foundation or building permit.

17 If you have either one of those, then you need
18 not comply with a change in the standards. However, if you
19 have not yet received a foundation or building permit, you
20 would be expected to comply with a change in the standards,
21 so it is the trigger of that, which is not necessarily,
22 depending upon people's judgment, related to how much money
23 may have been spent in putting in sewers.

24 So I think if I -- again, this is Commissioner
25 Edson's question, and in terms of seeking some opinion from

1 the building officials, or the world of building officials,
2 which is, number one does the term have an accepted meaning,
3 and then I don't -- let me defer again to Commissioner
4 Edson for clarifying your further question.

5 COMMISSIONER EDSON: I think the -- the rest of
6 my question goes to having a clear point identified in the
7 regulations for triggering the exemption.

8 My belief, based on previous representations of
9 CALBO and individual building officials, is that having
10 something that is a discrete date in time is certainly the
11 best thing, so if you can tie it to the issuance of a
12 permit or something of that sort, that's going to be the
13 clearest thing for enforcement of the provision.

14 So what CBIA was suggesting was, rather than a
15 foundation permit, because I think it comes too late in the
16 development process, I presume, there should be a more
17 general statement of some government approval.

18 Is that something that is -- what's your reaction
19 to that kind of suggestion as a building official, in terms
20 of the enforceability of that kind of language; and,
21 secondly, is there a better trigger than that?

22 MS. SPECHT: Yes, I believe so, because that is
23 too ambiguous for our terms, because if they did have to
24 go through a lot split or a zoning, as was mentioned, that
25 would be -- to us that's a government approval, so we would

1 have problems with government approval. You'd have to be
2 a little bit more specific.

3 But we feel comfortable with the language that was
4 in the old Title 24, that said if there was substantial
5 funds spent for development, and we disagreed with that as
6 a building department, then they could come to you and ask
7 for an exemption on that.

8 CHAIRMAN SCHWEICKART: Commissioner Commons?

9 COMMISSIONER COMMONS: I may have a solution here.
10 My problem --

11 COMMISSIONER EDSON: Can I add some clarification?
12 I think that still is in force and effect under the proposed
13 revisions, so that's unchanged. This is, as I understand
14 it, language which would state when, without coming to the
15 Commission, there is an exemption.

16 COMMISSIONER COMMONS: Rather than making this
17 a definition, because the definition isn't proper, because
18 actual site preparation is not construction activity under-
19 taken, or reliance upon a foundation or a building permit,
20 well, why don't we state it that actual site preparation
21 and construction shall be deemed to have been initiated when
22 any construction activity is undertaken in reliance upon
23 a foundation or building permit, and so we have it as a time
24 mechanism rather than as a definition of a term.

25 COMMISSIONER EDSON: Not presuming to speak for

1 CBIA, I think it has the same effect, and I tend to think
2 it doesn't solve the problem.

3 CHAIRMAN SCHWEICKART: All right. I think the
4 issue here is -- there are two things at issue here, and
5 we are -- we're walking around pretending there's not an
6 elephant in the room if you'll pardon me. What we're really
7 looking at here is a concern on the part of CBIA that they
8 want to have the maximum flexibility not to comply with
9 changes in the regulations.

10 At the same time, the Commission is quite concerned
11 to insure that changes in the regulations reasonably are
12 introduced into buildings that are in fact built, and the
13 question is what then triggers that. I think the clear
14 intention of the Committee, if I may suggest it, is that --
15 that is at such time as stated in the Committee report to
16 the Commission that in fact the design of the building must
17 be determined, and when one obtains the foundation permit
18 that clearly says you have to have defined the building,
19 not just cleared a few trees away or -- or put in sewers,
20 or whatever.

21 What we're looking for, then, is something which
22 is identifiable, both to the building industry and to CALBO
23 and other officials who must stamp off on certification of
24 these building permits, whether or not a provision of the
25 regulation applies.

1 Now, if foundation permit has in fact a well-
2 defined meaning, it then certainly is a valid trigger for
3 use. The question then before us, it seems to me, is is
4 that the trigger CBIA wants, but let's not mess around with
5 the question of is "foundation permit" a term that can be
6 included in definition without contention.

7 MR. COLLIN: Mr. Chairman --

8 CHAIRMAN SCHWEICKART: Yes.

9 MR. COLLIN: The witness has indicated that that
10 is a well-defined term. Would the witness indicate to the
11 Commission and to us, and for the record, what is a founda-
12 tion permit, and what its meaning is to her, and what its
13 application to residential construction is?

14 CHAIRMAN SCHWEICKART: That's fine.

15 MS. SPECHT: Okay.

16 CHAIRMAN SCHWEICKART: I would like to have that.

17 MS. SPECHT: I was just going to expand a little
18 bit on that.

19 You might say that -- or the Commission might
20 say that a foundation permit, and reliance upon a founda-
21 tion permit, but as a building department we have discretion
22 on whether or not we will issue a foundation permit.

23 I might choose to issue a foundation permit and
24 not have looked at any of the energy conservation features
25 of that building, because all I have to look at to issue a

1 foundation permit is the structural capability of that
2 foundation, not which way the windows are going to face,
3 or how much mass is in the building, so that's a very dis-
4 cretionary area for building officials.

5 Some building officials will not issue a founda-
6 tion permit without the total building plans being complete,
7 but other building officials look at it entirely differently.

8 CHAIRMAN SCHWEICKART: But let me -- let me just
9 make sure I understand.

10 After, however, regardless of the basis upon which
11 various building departments issue a foundation permit,
12 after issuance of a foundation permit a builder may in fact
13 take specific action to put in a foundation, and conversely
14 may not prior to obtaining a foundation permit. Is that
15 correct?

16 MS. SPECHT: He can -- in some jurisdictions he
17 can even dig the foundation, and he doesn't have to have
18 the permit until such time as he's ready to call for
19 inspection.

20 CHAIRMAN SCHWEICKART: I see. All right. Well,
21 I would essentially throw this back to the Committee. I
22 think we have at least some clarity in terms of -- of the
23 terminology, but I would throw it back to the Committee for
24 a recommendation to the Commission in terms of what options
25 we have or what you're recommending to us.

1 COMMISSIONER GANDARA: The Committee's recommen-
2 dation is as before you. After 15 minutes a determinate
3 foundation permit does have a meaning. It, you know, has
4 some flexibility which is, of course, the nature of all
5 things, but nonetheless, you know, I would say that if the
6 Commission has a concern of CBIA's reversal on this issue,
7 well, then, you know, we can have no change at all and just
8 go back to the original language again, which it was the
9 Committee's intent at least to resolve it the way that
10 CBIA had proposed and what seemed to be reasonable at the
11 time.

12 I think other than that, you know, I -- I don't
13 think we should deal with any other changes here at this
14 point.

15 CHAIRMAN SCHWEICKART: All right. Well, let me
16 then try to summarize by saying that it would seem to me
17 that we then have 2-5301(a)2., that section now is no
18 longer noncontroversial, and in keeping with what the
19 earlier indications were from the Chair, we would attempt
20 to give an indication at this point to the Presiding Member
21 as to what the Commission's intent was without taking a
22 formal vote, so that you can, as we get to the end of this
23 at some point, group or propose a single action by the
24 Commission.

25 COMMISSIONER COMMONS: Are you saying you want

1 our comments now?

2 CHAIRMAN SCHWEICKART: Well, I would -- I would
3 say not comments, but an indication of how we would propose
4 to dispose of the Committee's recommendation, and I would
5 support the recommendation of the Committee in both
6 2-5301(a)2., and 2-5302.

7 COMMISSIONER GANDARA: And Title 20.

8 COMMISSIONER COMMONS: Well, I would support it,
9 but I would also prefer to amend it.

10 COMMISSIONER EDSON: Given that we do have some
11 certainty that foundation permits are well understood by
12 local government, and frequently issued, and also given
13 that this does not preclude builders from coming before the
14 Commission to ask for an exemption in the event they have
15 made substantial investment, I would support the
16 Committee's recommendation.

17 CHAIRMAN SCHWEICKART: Okay. Then unless there
18 is something further, I would -- I'd propose -- well, let
19 me say, from the standpoint of orderliness and trying to
20 get through this, Commissioner Commons, can you identify
21 what your proposed amendment would be? Because I think
22 we ought to --

23 COMMISSIONER COMMONS: I think it's --

24 CHAIRMAN SCHWEICKART: -- rather than bring it up
25 later.

1 COMMISSIONER COMMONS: I think it's inappropriate
2 to define actual site preparation as a construction activity
3 undertaken in reliance upon a foundation. It just is not
4 the case, and what we should do is cross off the words "is
5 any" and insert the words "shall be deemed to have begun
6 when any construction activity," and then add the word "is
7 undertaken in reliance upon a foundation or building per-
8 mit."

9 What we're really trying to do is set the trig-
10 ger, as I think Commissioner Edson said, rather than define
11 -- as Commissioner Gandara said, we don't want to introduce
12 more definitions. What this does is sets the trigger,
13 rather than define.

14 CHAIRMAN SCHWEICKART: Well, first of all, let me
15 say that 2-5302 I believe is within the definitions section
16 of the regulation, so by -- by definition, it is in the
17 definition.

18 So the -- the clear intent is to define the use
19 of the term. That being the case, let me ask whether your
20 amendment is to clarify the definition or to extract it
21 from the category of definition.

22 COMMISSIONER COMMONS: My intent is to clarify the
23 -- clarify the definition --

24 CHAIRMAN SCHWEICKART: Okay.

25 COMMISSIONER COMMONS: -- by inserting the words

1 "shall be deemed to have begun when any construction
2 activity is undertaken."

3 CHAIRMAN SCHWEICKART: All right. Well, I guess
4 my feeling is that that's perfectly acceptable to me. I
5 don't know that it clarifies that much, but I certainly have
6 no problem with that amendment.

7 COMMISSIONER GANDARA: I -- since I don't think
8 it makes any difference, you know, I would normally have
9 no problem, but the fact that I don't want there to be
10 another definition here that's different from what we used
11 in the previous building standards, and what people have
12 been comfortable with using, that's my only concern, that
13 there's going to be speculation, you know, after I'm no
14 longer here, after most of us are no longer here, as to
15 what did the Commission mean when it actually changed, you
16 know, from one to the other.

17 And I -- you know, simply because it makes no
18 difference to me in terms of what it means, I'd just rather
19 keep something that has been there.

20 CHAIRMAN SCHWEICKART: Do we have a copy of the
21 other definitions of this section? I find myself absent the
22 section in which I can frankly examine this, but clearly in
23 the definitions section in a set of regulations one usually
24 finds a certain format consistency from one item to the
25 next, and I think that would be, in my own view, an

1 overriding consideration, so that we don't find in one case
2 "is" and in another case "shall be deemed to be," or what-
3 ever.

4 MR. RATLIFF: It's consistent with the format that
5 we use in our present regulations. There is no inconsis-
6 tency in the format.

7 CHAIRMAN SCHWEICKART: Well, which is it consis-
8 tent with, the amendment proposed by Commissioner Commons
9 or --

10 MR. RATLIFF: No. The amendment that is in the
11 proposed language.

12 CHAIRMAN SCHWEICKART: And conversely, if the
13 wording were to be amended to "actual site preparation and
14 contruction shall be deemed to have begun when" is not
15 consistent with the --

16 MR. RATLIFF: That is not consistent with our
17 definition section.

18 CHAIRMAN SCHWEICKART: All right. Well, then I
19 -- again, because of that, and the fact that we're talking
20 about a definition section, I would change my signal here
21 and indicate support of the wording as proposed by the
22 Committee.

23 COMMISSIONER COMMONS: Your statement was it is
24 not consistent.

25 MR. RATLIFF: Yes.

1 COMMISSIONER COMMONS: What is the existing word-
2 ing?

3 MR. RATLIFF: We do not presently have the
4 existing proposed language in the definition section, but
5 as the definition section exists, we usually take the
6 phrase that's put in high capital letters, and then what-
7 ever the definition is for that particular phrase follows
8 the word "is."

9 COMMISSIONER COMMONS: Can you tell me what the
10 existing definition for actual site preparation and con-
11 struction is in the existing regulations?

12 MR. RATLIFF: We haven't defined it, and that's
13 why we're trying to define it here.

14 COMMISSIONER COMMONS: All right. So then what
15 you're really stating is neither the proposed language of
16 the Committee nor the amendment is consistent.

17 MR. RATLIFF: No, that's not what I'm saying.

18 COMMISSIONER COMMONS: All right. How is it con-
19 sistent with the proposed language, if you don't have a
20 definition?

21 MR. RATLIFF: It's consistent in form to the --
22 to the definitions that we currently have in the definition
23 section of our building regulations.

24 COMMISSIONER EDSON: But it is not in the defini-
25 tion section.

1 MR. RATLIFF: Not currently. That's why we're
2 adding it.

3 CHAIRMAN SCHWEICKART: No, no, no.

4 COMMISSIONER EDSON: To the definition section,
5 or to a separate section?

6 MR. RATLIFF: We're adding it to 2-5302, which is
7 the definition section.

8 COMMISSIONER COMMONS: What we're doing is we're
9 adding, Commissioner Schweickart, a definition that is
10 inappropriate if we adopt the language of the Committee.

11 CHAIRMAN SCHWEICKART: I'm sorry. Let me -- let
12 me get some things clarified here.

13 Dick, is there a definition section in the current
14 regulations?

15 MR. RATLIFF: Yes. That's Section 2-5302.

16 CHAIRMAN SCHWEICKART: All right. Then would
17 this not be 2-5302(a), (b), (c), (f), (g) --

18 MR. RATLIFF: No.

19 CHAIRMAN SCHWEICKART: -- or some subset? I mean
20 this says 2-5302, period.

21 MR. RATLIFF: The format used by the UBC has been
22 copied by the State Building Standards Commission in the
23 State Building Code. That does not give a subletter, such
24 as --

25 CHAIRMAN SCHWEICKART: I see. So all definitions

1 within Section 2-5302 are listed seriatim without any
2 subsections.

3 MR. RATLIFF: In alphabetical -- in alphabetical
4 order.

5 CHAIRMAN SCHWEICKART: All right. Fine. And I
6 have them here before me, and I can show them to all
7 Commissioners. They read as follows. "Blank is the so-
8 and-so. Blank is the so-and-so." Et cetera. Not "Blank
9 is deemed to be."

10 Now, in terms of consistency, then, what I am
11 saying is that, where we talk about actual site preparation
12 and construction, the "is," whatever, is consistent.

13 COMMISSIONER EDSON: Let me ask for comments on
14 adding at the end of the definition, for purposes of
15 2-5301(a)2.E. Part of the concern that I've heard expressed
16 by CBIA is that site preparation and construction is a term
17 that's used frequently in the statute, not solely in rela-
18 tion to the exemption --

19 MR. COLLIN: No. No, I -- I'm not aware of it.

20 COMMISSIONER EDSON: That's not a concern?

21 MR. COLLIN: No. I'm not -- Commissioner Edson,
22 I'm not familiar of that phrase being used, other than in
23 2-5402.1F. I may have not indicated clearly that the prior
24 places where it had been used in statute, those statutes had
25 been repealed as it got moved around and got moved from the

1 Health and Safety Code -- a predecessor type statute, it
2 wasn't precisely this, was found in 1998, or something, in
3 the Health and Safety Code, up until the Commissions Act
4 was chaptered, and then it came back.

5 Then it got into regulation, or at least -- then
6 it got back into the statute in about '77, in the -- the
7 2-402.1F. I'm not aware of it elsewhere.

8 MR. RATLIFF: I'm not either.

9 MR. COLLIN: No.

10 COMMISSIONER EDSON: Never mind.

11 CHAIRMAN SCHWEICKART: All right. Let me just
12 ask, Commissioner Edson, which of the alternatives do you
13 -- would you support, then, that proposed by the Committee,
14 or the language that Commissioner Commons is proposing to
15 substitute?

16 COMMISSIONER EDSON: I don't think there's any
17 reason in changing the form of this definition relative to
18 the other.

19 CHAIRMAN SCHWEICKART: All right. Fine.

20 COMMISSIONER EDSON: I would like to stay with it
21 as it is.

22 CHAIRMAN SCHWEICKART: Mr. Collin, thank you.

23 I'm sorry, I've forgotten your name, but thank
24 you very much.

25 COMMISSIONER COMMONS: Will we have a formal vote

1 on this, then?

2 CHAIRMAN SCHWEICKART: We will have a formal vote
3 at the end of the entire issue that we're taking up. We
4 are providing signal to the Presiding Member so that he may
5 better present to the Commission a final vote.

6 COMMISSIONER COMMONS: All right. I just put on
7 the notice that I'll be making that -- that amendment at
8 the end.

9 CHAIRMAN SCHWEICKART: 2-5351(a). Are there any
10 people who care to address the Commission on that section?

11 All right. Fine. 2-5351(c)1.

12 All right. I -- oh, I'm sorry. Yes, there are
13 people. All right. Mr. Steel, if you'll come forward on
14 2-5351(c)1, and Commissioner Gandara, would you -- who
15 would you like to designate to summarize there, if anyone?

16 COMMISSIONER GANDARA: Okay. We are at 2-5351(c)?

17 CHAIRMAN SCHWEICKART: (c)1., the middle of page
18 2.

19 COMMISSIONER GANDARA: Okay. Staff can comment
20 on this one. This is the definition of the solar access,
21 I believe.

22 MR. HUSTON: The staff essentially attempted to
23 clarify in the regulations that Packages (a) and (c),
24 Package (a) being a passive design and Package (c) requiring
25 active domestic water -- requiring domestic -- solar

1 domestic water heating, that to have either of those two
2 packages constructed on a site, that that site have solar
3 access.

4 If the site, for example, were in the middle of
5 a forest, the building would not perform because it did
6 have the solar access that was assumed when the budgets
7 were determined.

8 The language that we have used to define solar
9 access is consistent with language in other parts of the
10 Administrative Code.

11 COMMISSIONER GANDARA: The Committee was requested
12 by building officials, among others, to provide more
13 specific direction as to what was meant here, and so that's
14 merely all that we've done in this area, just to indicate
15 what solar access is.

16 CHAIRMAN SCHWEICKART: All right. Let me say that
17 under this heading, in terms of an underline, we actually
18 have two different issues we're dealing with. One is solar
19 access, and the other is the issue of slab edge insulation.
20 I would like to separate those into two different parts,
21 so let's deal with the solar access, which I think is what's
22 been addressed and comes first in that section.

23 Mr. Steel, and I invite your comment.

24 MR. STEEL: The concept of Packages A and C having
25 solar access is sort of a logical comment, since they are

1 called a passive solar package, and active solar water
2 heating package. It made sense when it was proposed in the
3 45-day language. However, upon review of the Committee's
4 proposal at this time, which is much more detailed in
5 defining solar access, I find that it is too specific. I
6 -- and I recommend that the amendment all underlined there,
7 starting with Package A and going out to 2:00 p.m., just
8 simply be deleted as unnecessary.

9 I support that request in the handout that I gave
10 you where it says Package A and Package C. I have given
11 you the reason in Package A why it should be deleted, and
12 the reason in Package C.

13 Basically, in Package A, we've been thinking a
14 lot about solar as meaning you face your windows to the
15 south, and you -- and you collect the sun's energy in the
16 wintertime, and that's a significant issue, and although
17 that's certainly not an insignificant issue, a much more
18 significant issue in the standards is reducing of air con-
19 ditioning energy in the summertime.

20 Most climate zones are dominated by the air con-
21 ditioning energy instead of the heating energy, and so I
22 selected a typical climate zone, Sacramento, and this is
23 typical, and you can go through almost all the other climate
24 zones and get these same kind of numbers, and I took ten
25 percent of double-pane window and just looked up the points,

1 ten percent of the floor area in double-pane window, on --
2 on south, north, east and west, and you see that -- that
3 the most energy-efficient is the one with the smallest minus
4 points, in other words the minus four points the north is
5 much better than the west minus 24 points. Minus 24 points
6 is really bad. Minus four points is near zero.

7 As you see, the north windows, which get very --
8 you know, which act as close as you can to shaded south
9 windows, are actually more efficient than south windows
10 unshaded, and -- and so I would offer that shaded south
11 windows are not a bad window. Shaded south windows may be
12 more energy-efficient in most zones than unshaded south
13 windows, and what you're avoiding is air conditioning load
14 when you shade them.

15 You're going to lose a little bit of winter per-
16 formance, but you're going to gain some summer performance.
17 You're going to gain some summer performance and lose some
18 winter performance. You're probably going to come out
19 better off with shaded south windows.

20 CHAIRMAN SCHWEICKART: Okay. For the sake of
21 brevity, I think the point is made, and I think the ques-
22 tion is does the staff have any comment on that. It seems
23 to make sense if the numbers are right.

24 MR. HUSTON: I guess the only comment I have to
25 make is that, in Package A, which is the one that's being

1 used as the example, that in addition to the solar access
2 that we're proposing, that that package also requires that
3 both south and west-facing windows have optimal overhang
4 and a point -- or a .36 shading coefficient on those win-
5 dows.

6 So what we're saying here is, yes, those windows
7 have to be shaded, as Jerry has pointed out, for summer, but
8 to get the performance in the wintertime to decrease that
9 heating load, the sun has to be able to get into those
10 windows, and that's all we're saying in this amendment. If
11 you are going to build Package A, you've got to be able to
12 get the advantage of the winter sun, and if it doesn't
13 strike the building at all you're not going to get that
14 benefit.

15 COMMISSIONER EDSON: Is it true that the cooling
16 savings greatly outweigh the heating savings? If -- if in
17 fact having a --

18 MR. HUSTON: Yeah. It certainly depends on the
19 zone.

20 COMMISSIONER EDSON: -- having your south-facing
21 glass next to a tall building gives you cooling savings that
22 dwarf the heating loss you have during the wintertime. The
23 question is, is that true?

24 MR. HUSTON: Certainly in -- in those zones where
25 cooling predominates, yes. I'm sure that's a consideration.

1 MR. STEEL: Which I would offer is quite the
2 majority of the zones. We are talking here about additional
3 shading beyond the horizontal overhang that he talked about.
4 I'm claiming that additional shading on the south side year-
5 round is not necessarily a bad deal.

6 And I will note that when staff, you know -- that
7 the base house for the California Energy Commission does
8 not meet this requirement. The garage would obstruct more
9 than ten percent of the window between the hours of 2:00
10 and 10:00 -- or 10:00 and 2:00, and -- you know, I mean --
11 I just think it hasn't been yet well thought out, and
12 it probably isn't really necessary. It could be put into
13 the compliance manual as a recommendation that you get as
14 much sun as you can to your south windows.

15 COMMISSIONER GANDARA: Let's see if we have any
16 comments from the building department officials that may be
17 here, since this was certainly one of the issues that they
18 raised they wanted some clarification on that. Ms. Specht
19 and Mr. Shaw are out there. Again, as with the other
20 proposals, you know, a clarification was requested. It
21 seems to be reasonable if it's not so desired we can eliminate
22 it.

23 CHAIRMAN SCHWEICKART: Mr. Eley? Well, excuse me.
24 I'm sorry. Your name?

25 MR. RAYMER: Bob Raymer with CBIA.

1 CHAIRMAN SCHWEICKART: All right.

2 MR. RAYMER: Okay. It's mentioned in the staff
3 report that this is in response to the CBIA and building
4 officials' request.

5 This is not a request. We mentioned that as a
6 potential problem on some sites. We have to agree with
7 Mr. Steel in that we would like to see the amendment
8 deleted, and that, depending on the individual situation,
9 it may be more logical to have the shading during the
10 summertime, and this is just an issue that's going to have
11 to be resolved site by site, yes.

12 CHAIRMAN SCHWEICKART: So basically CBIA is saying
13 they don't any longer consider it a problem --

14 MR. RAYMER: No.

15 CHAIRMAN SCHWEICKART: -- after Mr. Steel's
16 analysis?

17 MR. RAYMER: No. Not that. We do consider it
18 a problem, but one that can't be addressed in this fashion.
19 This right here is -- it's a widespread, across-the-board
20 attempt at solving the problem, and it's a problem that is
21 site-specific, and this, where it may help in some cases,
22 may well cause more damage than good, so as far as this
23 amendment is concerned we're opposed to it and would like
24 to see it deleted.

25 CHAIRMAN SCHWEICKART: All right. Again, is any --

1 I take it we don't have a CALBO representative. I don't
2 know if you feel that you can speak for CALBO or not.

3 Excuse me. Could you remind me of your name? I
4 apologize.

5 MS. SPECHT: I'm Doris Specht from the City of
6 Stockton.

7 CHAIRMAN SCHWEICKART: Yes, Ms. Specht.

8 MS. SPECHT: And in the Committee hearings, I was
9 the person that suggested that we needed a definition for
10 solar access, because, you know, I don't understand that
11 much about mass, and so on, but, you know, there's very
12 specific requirements about the sun hitting the mass in
13 Package A, so -- and even if you're not worried about the
14 south glass, this also addresses collectors, and if you
15 put collectors on a roof that never get any sun to provide
16 solar hot water, you just -- you know, you just blew it.

17 CHAIRMAN SCHWEICKART: All right. Mr. Steel has
18 not addressed the issue of the active collector yet.

19 Mr. Eley, did you care to comment on the south
20 glass issue?

21 COMMISSIONER EDSON: I have a question for
22 Ms. Specht, if I can ask --

23 CHAIRMAN SCHWEICKART: Yes. Commissioner Edson.

24 COMMISSIONER EDSON: Is this an issue that can be
25 dealt with in the manual, or do you think it requires

1 clarification in the regulations themselves?

2 MS. SPECHT: I think it should be a definition
3 in the regulations.

4 CHAIRMAN SCHWEICKART: Mr. Eley?

5 MR. ELEY: I'm for the record Charles Eley,
6 representing the California Council of the American
7 Institute of Architects.

8 Several of our members have commented that there
9 needs to be a provision for solar access in packages. The
10 problem we have with this one is it's too vague. Between
11 10:00 a.m. and 2:00 p.m. on which dates of the year? Is
12 it -- is it -- and ten percent -- a maximum of ten percent
13 can be shaded, what, for an average during those -- that
14 period of time from 10:00 to 2:00, or at any particular time
15 between 10:00 and 2:00, if the ten percent is shaded, are
16 you disqualified?

17 So I don't think this current language is enforce-
18 able.

19 COMMISSIONER COMMONS: I suggest we delete it.

20 CHAIRMAN SCHWEICKART: Mr. Eley, do you have a
21 recommendation in terms of either forgetting it entirely,
22 in terms of the statute, or -- excuse me, the regulations,
23 or including some language in the conservation manual?

24 MR. ELEY: Well, unless we can come up with a
25 cleaner definition, I'd recommend that we just omit it.

1 CHAIRMAN SCHWEICKART: Okay. At this point your
2 recommendation would be basically to omit it. I think I'd
3 like to shift back to Mr. Steel in terms of collectors.
4 I don't know if you want to respond to that afterward.

5 MR. ELEY: Well, I have the same comment about
6 collectors, so --

7 CHAIRMAN SCHWEICKART: All right.

8 MR. ELEY: -- you can extend my comments to both
9 the south glass and collectors.

10 CHAIRMAN SCHWEICKART: Do you want to hit the rest
11 of the regulations while you're at it?

12 MR. ELEY: No. That's fine.

13 CHAIRMAN SCHWEICKART: Okay. Mr. Steel.

14 MR. STEEL: I concur with Charles on that. That
15 was -- when I read it I said, oh, no, I can't -- I mean I
16 can't even deal with that definition. Let's get rid of it.

17 By the way, it does eliminate the reference to
18 solar access, too, so you don't have a definitional problem
19 at the building official level. There is no requirement
20 that Package A and C have solar access if this was approved.
21 They would be encouraged to, but they would not be required
22 to.

23 CHAIRMAN SCHWEICKART: Okay.

24 MR. STEEL: You wouldn't have to check them out.

25 CHAIRMAN SCHWEICKART: Mr. Steel, could you focus

1 on the --

2 MR. STEEL: Yes.

3 CHAIRMAN SCHWEICKART: -- the active collectors,
4 please, and Package C.

5 MR. STEEL: Well, basically, Section 2-5351(c)9
6 states that the collectors in Package C must be designed
7 to provide 60 percent of the annual water-heating budget,
8 and as long as the collectors meet that regulation and are
9 designed to provide that 60 percent, you don't care if you
10 had to make them twice as big because half of them were
11 shaded, or whatever, so it's redundant in that sense.

12 CHAIRMAN SCHWEICKART: All right. Are there any
13 further comments on that?

14 All right.

15 MR. HUSTON: I have -- I have one comment on that,
16 Commissioner.

17 CHAIRMAN SCHWEICKART: Yes.

18 MR. HUSTON: I hate to beat a dead horse, perhaps.
19 The test that would be used to provide or to demonstrate
20 that 60 percent solar contribution, we would not expect
21 to have to happen at every single site where these collec-
22 tors might be installed, but we would rely on TIPSE data
23 or SRCC data, or other solar system and collector testing
24 procedures, to demonstrate the output of that system. This
25 requirement would simply guarantee that the performance

1 that is predicted by that test would actually occur on-
2 site.

3 COMMISSIONER EDSON: Do you have the extent to
4 which the solar installation standards that the Commission
5 is working with CALBO to develop would address that ques-
6 tion? My recollection is that it does, but --

7 MR. HUSTON: I'm sorry. I do not know the answer
8 to that.

9 CHAIRMAN SCHWEICKART: That's certainly a very
10 good point.

11 All right. Again, I guess I would at this point,
12 unless there's further comment on these provisions, I would
13 return to Commissioner Gandara on -- on this item, again
14 in the spirit of what we're trying to do here, and expedite
15 as much as possible. I would support deletion of these
16 provisions.

17 COMMISSIONER GANDARA: Well, again, you know, as
18 I said before, this was a -- a request for a definition.
19 Mr. Steel first says that it's more specific than practical,
20 and Mr. Eley says it's not specific enough, and there you
21 have the problem.

22 Frankly, I'm indifferent, you know. These people
23 have changed their position on this, so, it's fine to
24 delete it.

25 COMMISSIONER EDSON: I would concur with deletion

1 until we have a definition that is more widely accepted and
2 clear.

3 CHAIRMAN SCHWEICKART: Commissioner Commons?

4 COMMISSIONER COMMONS: I concur.

5 CHAIRMAN SCHWEICKART: All right. Let's move on
6 to the second part, then, of 2-5351(c)1.C., which then
7 gets into the issue of slab edge insulation.

8 COMMISSIONER GANDARA: I should note there's a
9 change. You skipped over in between, on one --

10 CHAIRMAN SCHWEICKART: Oh, yes, wood-framing.

11 CHAIRMAN SCHWEICKART: -- wood, that should not
12 present a problem to anybody.

13 CHAIRMAN SCHWEICKART: Are there any comments
14 on the addition of the word "wood" in the insulation sec-
15 tion of 2-5351?

16 All right. There being none, let's move on to
17 2-5351(c)1.C., regarding perimeter insulation. Are there
18 comments on that?

19 All right. If there are not, we will then move
20 on to 2-5351(c)3.

21 Yes. We have comments on that. Commissioner
22 Gandara, would you care to -- I take it that they are non --
23 it's not grammatical, Charles?

24 MR. ELEY: No, it's not.

25 CHAIRMAN SCHWEICKART: All right.

1 Commissioner Gandara, would you care to intro-
2 duce this item?

3 COMMISSIONER GANDARA: Yes. I want staff to
4 address this issue.

5 CHAIRMAN SCHWEICKART: All right.

6 MR. HUSTON: There are two proposed changes, I
7 guess substantial changes. The first is a note to clarify
8 that permanently tinted glazing cannot be used to meet the
9 shading requirements in the packages. Essentially that is
10 consistent with the analysis that was done to develop
11 those packages, the idea being that the shades have to be
12 removed in the winter months in order to collect the --
13 the advantage from the sun.

14 The second change, we had some requests from the
15 building industry -- or, excuse me, from building officials
16 to clarify what we meant by tight-fitting for internal
17 shades. Originally the staff had proposed simply removing
18 that, on the understanding that the ASHRAE values for
19 internal shades took into account, not only the reflective
20 properties of the internal shade and the absorptive
21 properties of that internal shade, but also took into
22 account the convective characteristics of the shade as it
23 was actually installed in the home.

24 We received input from Judy Tretheway pointing out
25 to us that the ASHRAE test in fact did not take into

1 account the convective characteristics of that installa-
2 tion, and thus we are proposing that language that was
3 adopted by this Commission in the conservation tax credit
4 be included in the building standards to offer more guidance
5 to the building inspectors as to what would qualify as an
6 internal shade.

7 CHAIRMAN SCHWEICKART: All right. Mr. Eley?

8 MR. ELEY: Well, I haven't -- I haven't seen this
9 research that was referenced by Ms. Tretheway, but the --
10 for an internal shade to be effective, it only has to
11 reflect the radiation back to the out-of-doors. This does
12 not require that it be tight-fitting or that it be gasketed
13 around the edge.

14 Such a requirement as this would certainly favor
15 movable insulation, which is the product Ms. Tretheway
16 represents, and I don't think it's the intent of this
17 section to require that internal shades be movable insula-
18 tion, so I would like to see this -- this section struck.
19 I don't believe that it's necessary, and -- I'll just leave
20 it at that.

21 COMMISSIONER COMMONS: I have a question.

22 CHAIRMAN SCHWEICKART: Yes. Commissioner Commons.

23 COMMISSIONER COMMONS: Would you be saying, then,
24 that you would like to strike all the words that are under-
25 lined --

1 MR. ELEY: No, sir. I --

2 COMMISSIONER COMMONS: -- except you would like
3 to eliminate the word "tight-fitting"?

4 MR. ELEY: No, I would -- I would recommend that
5 we keep the note on tinted glazing. I think that's -- that's
6 necessary.

7 But the sentence on "Internal shades shall be
8 tight-fitting, fully-weatherstripped, gasketed, or otherwise
9 treated, to limit infiltration," I would strike that, that
10 entire section.

11 COMMISSIONER COMMONS: But you would also strike
12 the words "and tight-fitting."

13 MR. ELEY: Yes, as proposed there.

14 COMMISSIONER COMMONS: Okay.

15 CHAIRMAN SCHWEICKART: All right. Mr. Steel?

16 Are there any other questions for Mr. Eley?

17 Let me ask one for Mr. Eley. I guess at this
18 point -- excuse me. The real question here in my mind
19 is what the basis of the standards was, that is, what was
20 assumed in the computation during the development of the
21 residential building standards, regarding not just the
22 radiation issues, but also the temperature of these internal
23 shading devices and convection around them into the -- into
24 the dwelling.

25 Clearly the point you make is well taken, Mr. Eley,

1 if in fact the absence of convective heating was not a
2 part of the calculations.

3 Mr. Huston, can you clarify that?

4 MR. HUSTON: As near as I can tell, the -- the
5 staff and the Commission did all of their modeling based
6 on external shading and assumed that a certain amount of
7 the -- the solar gain did not get into the home because of
8 the shading coefficient assigned to an exterior shade. We
9 didn't -- we then allowed internal shades to be used if it
10 met certain criteria, and that is that it had the same
11 shading coefficient and, even under the old language, that
12 it be tight-fitting to counteract the convective heat gains
13 that would come into the house.

14 We wouldn't have those convective gains if the
15 shade were outside. It would simply stay in the -- in the
16 outside air.

17 CHAIRMAN SCHWEICKART: So you're saying that there
18 was no specific analysis done as to the contribution to the
19 internal heat load of convection, vis-a-vis radiation of
20 an internal shading device.

21 MR. HUSTON: We assumed that, so long as the
22 shading coefficient value was met, that it didn't make any
23 difference whether it was outside or inside. Again, we
24 said it needed to be tight-fitting, though, because even
25 back then we understood the problems with convection. It

1 may help to clarify things. I know that Judy Tretheway is
2 here and she may be able to shed some light on this as well.

3 CHAIRMAN SCHWEICKART: No pun intended, of course.

4 MR. HUSTON: No. That's a nice reelection on you.

5 (Laughter.)

6 MR. ELEY: Let me ask -- let me ask a question.

7 CHAIRMAN SCHWEICKART: I'm conducting this hear-
8 ing.

9 MR. ELEY: Does this requirement impose a restric-
10 tion for all internal shades? For instance, if I want
11 credit for some type of interior shade with the point system
12 or with the -- with the performance approach, would this
13 require that that shade be, quote, tight-fitting and
14 fully weatherstripped, et cetera?

15 MR. HUSTON: Yes, if it's internal.

16 MR. ELEY: Okay. Then my issue, then, is more
17 basic than what was used to set the standards. What you're
18 doing, you're restricting the use of a tactic for saving
19 energy in buildings by introducing this language, because
20 this applies to a performance approach, as well as to
21 packages.

22 CHAIRMAN SCHWEICKART: All right. Let me see.
23 Who else wanted to address this issue?

24 MR. STEEL: I do, but I'd like to hear Judy before
25 I do.

1 CHAIRMAN SCHWEICKART: Well, I don't see her hand
2 up, but I do see Earl Ruby's hand up. Let me call on
3 Mr. Ruby.

4 MR. RUBY: We would like to support Charles Eley
5 on the deletion of the last sentence in 2-5351(c)3.C. for
6 slightly different reasons. That we feel that there cer-
7 tainly is a benefit to be gained, especially in performance
8 analysis, by using other means of shading than the tight-
9 fitting, fully-weatherstripped, gasketed, or otherwise
10 treated devices, and if that requirement is levied as a
11 part of the requirement for movable shading device, we would
12 suspect that it would be used very, very seldom, because it
13 is just prohibitively costly, so by deleting it we think that
14 there's some energy to be saved by other types of movable
15 shading devices that would not meet all of the requirements
16 of that particular underlying section.

17 CHAIRMAN SCHWEICKART: All right. Mr. Steel?

18 Are there any questions of Mr. Ruby?

19 Mr. Steel?

20 MR. STEEL: Does Judy want to -- I'd like to hear
21 what she has to say, because this is sort of new information
22 to me, about the ASHRAE handbook.

23 MS. TRETHERWAY: I'm Judy Tretheway. I represent
24 a number of different insulating window treatments.

25 The discussions I went through after speaking

1 with Phil concerning the ASHRAE testing, I talked to dif-
2 ferent testing lab officials at ASHRAE -- at Lawrence
3 Berkeley Laboratory, and at Matrix, and a number of dif-
4 ferent companies that perform the shading coefficient tests,
5 and in trying to understand how the tests were done and
6 how they would test in internal shade, and the procedures
7 that ASHRAE developed over the past have all been with
8 standard venetian blinds and loose-fitting drapes, and they
9 all assume about 75 percent of the heat that is absorbed
10 into the room is transmitted into the room environment,
11 and then adding to the cooling load.

12 Okay. So that -- so that, therefore, the staff
13 assumption that the shading coefficient took into considera-
14 tion a tight side seal that the convection losses would not
15 occur was incorrect according to the way this standard --
16 the standard testing labs are conducting their tests and
17 calculating the coefficients.

18 There are ways you can make different assumptions
19 when you're making a test, but that's not the standard pro-
20 cedure, and I'm not one to presume that we should Mickey-
21 Mouse around a standard testing procedure just to get a
22 different score out and improve.

23 The ways that -- a shade that is tight-fitting
24 not only reflects the sun out, but stops the -- the con-
25 ducted and the infiltrated heat as well, and if it has some

1 value to it it, therefore, stops the convection -- I mean
2 the convection as well as the conductive.

3 CHAIRMAN SCHWEICKART: All right. Let me say a
4 few words here.

5 I am quite sensitive to the duration of this hear-
6 ing and to certain issues which -- let me say personal
7 situations here at the front, and I am trying to expedite
8 this process as much as possible. It's quite clear that
9 tight-fitting shades are going to produce less heat in the
10 room than nontight-fitting.

11 The question here is do we amend the regulations
12 how, or do we not? Do you recommend, given the data and
13 the analytic basis on which we would alter the standards,
14 that we move forward with this change at this time?

15 MS. TRETHERWAY: Yes. I would like to see the
16 change as stated by this --

17 CHAIRMAN SCHWEICKART: All right. All right, fine.
18 Are there any questions here?

19 COMMISSIONER GANDARA: No questions. I had a
20 comment, but it can wait till the last comment.

21 CHAIRMAN SCHWEICKART: All right. Mr. Steel?

22 MR. STEEL: I believe Judy told us that when the
23 standard tests were done on ASHRAE on shading coefficients
24 that they assumed that 75 percent of that which was absorbed
25 by the shade came into the room. That means that they did

1 take into account the convective heat gain. The shading
2 coefficient is defined as the solar heat gain into the
3 room through some assembly compared to a single plate of
4 glass, so I believe that she has said -- I maybe didn't
5 understand, but that the solar heat gain, convective heat
6 gain is taken into account when a shading coefficient is
7 assigned by ASHRAE for an internal shade. They do not --
8 they do not -- you know, shades -- if it has a shading
9 coefficient, that's all that the condition is. If it meets
10 the shading coefficient, that is what was modeled in the
11 code. It's the same as whether it's got the shading
12 coefficient on the outside or the inside. It doesn't make
13 any difference. A shading coefficient is a shading
14 coefficient if it defines how much solar heat gain that the
15 shade provides.

16 A tight-fitting shade will in fact save more
17 energy, but it will save more energy that was modeled in the
18 computer computation, and in fact will have a higher shad-
19 ing coefficient, a better shading coefficient, so I think
20 that we ought to encourage -- and I have made a statement
21 on this at the bottom of the handout that I gave you
22 before -- I think we ought to encourage tight-fitted inter-
23 nal shades to have shading coefficients put into the com-
24 pliance manual for reference, but it is just as valid --
25 you know, a silver-colored or even a white-colored

1 venetian blind, which obviously has a lot of convective
2 difficulties, the shading coefficient is valid for that,
3 just the same as if it was installed outside. The number
4 is the ratio of solar heat gain.

5 Therefore, I ask for deletion, and I think it's
6 -- to me it's absolutely clear that it should be deleted.
7 Otherwise, you are -- you are requiring a higher shading
8 coefficient on the internal shades than was modeled.

9 CHAIRMAN SCHWEICKART: Thank you. Any questions
10 for Mr. Steel?

11 COMMISSIONER GANDARA: No. Just some information
12 for the Commission's consideration.

13 Several people have commented that this is dif-
14 ferent than what was at the previous hearing, and that is
15 true. At the initial hearing it was -- the reason -- the
16 way this arose, there was a concern by the building officials
17 as to implementation of the tight-fitting requirement, and
18 as well as some other concerns which have been brought out
19 with respect to external shading versus internal shading
20 modeling.

21 At that time it was the Committee's exploration
22 of the removal of the tight-fitting requirement that then
23 brought forth a written submittal by Ms. Tretheway, in which
24 I think she argued persuasively with respect to her interest,
25 and staff then came back to the Committee with this

1 recommendation, so in essence it is different from what had
2 been considered before.

3 The Committee, however, was impressed both by
4 Ms. Tretheway's submittal, as well as staff's arguments,
5 for returning or including this particular recommendation
6 or this particular language.

7 Unless there's been -- there clearly appears to be
8 a difference of opinion as to what was taken or not taken
9 into account, and clearly, despite what Mr. Steel and
10 Ms. Tretheway may say, it was the Committee's belief then,
11 based upon the staff reevaluation and analysis, that the
12 current recommendation before you was the one that more
13 correctly reflected the intent of the standards.

14 So that -- that's the history of where we are,
15 and that's basically the issue before you. I think, to my
16 understanding, that still is the current situation, and
17 beyond that I would have no more to say on it.

18 CHAIRMAN SCHWEICKART: I get your drift. To con-
19 tinue this running pun. Let me -- we are -- it would seem
20 to me the only factual issue here, that is what was and
21 what was not accounted for in the ASHRAE testing, in terms
22 of the use of the word "shading device," was convection and
23 presumably even reradiation, as well as direct reflection,
24 considered in terms of the definition of shading device or
25 -- or shading coefficient, excuse me -- in the work that was

1 done, and I wonder if the staff would comment on it.

2 Clearly, if those things were accounted for, then
3 striking "tight-fitting" and striking the last sentence are
4 clearly the appropriate action. If in fact they were not
5 accounted for, then it would appear as though the
6 Committee's recommendation reflects that reality.

7 MR. HUSTON: I read --

8 CHAIRMAN SCHWEICKART: Yes. I did it, too.

9 MR. HUSTON: I reread the ASHRAE procedures on
10 shading coefficient, and they go into great detail about
11 the three kinds of heat gain you get through glazing, and
12 what effect you have with internal shades, including the
13 -- a discussion of convection.

14 However, later on in the section in the procedures,
15 when they talk about the actual testing, my rereading of
16 it indicated that they did not look at convective considera-
17 tions, that they -- they set up the material in a test con-
18 dition that did not reflect or was not an actual installa-
19 tion of how the product was intended to be used, and they
20 looked only at the properties of the material used in the
21 -- in the device.

22 They looked at its reflective properties, and they
23 looked at how much heat it could absorb itself, and it was
24 a -- a test of the product, of the material in the product,
25 and not a test of how the product was not only made, but

1 also how it was installed.

2 MR. STEEL: Did that test apply to venetian
3 blinds? Because those are rated in the ASHRAE handbook,
4 and I'm sure that they must take convection into account.

5 MR. HUSTON: The -- the test applied to -- again
6 it was a standard test. It did not say that they had a
7 different test for drapes versus venetian blinds, versus
8 interior screens. I was a single test procedure, and my
9 reading of it was that it did not take into account how the
10 product was actually installed, but more the physical
11 properties of the material used in the product.

12 CHAIRMAN SCHWEICKART: So your reading of it is
13 that the actual evaluation of shading coefficient took
14 account for the reflection of the internal shading device
15 of the direct solar input, took account of the heat absorp-
16 tion and, therefore, the reradiation into the living quar-
17 ters, but did not take account of the convective losses of
18 that heat absorption.

19 MR. HUSTON: That could happen around the product,
20 that's correct.

21 MR. STEEL: I might note, Commissioner, that the
22 -- that if you do a tight-fitting shade, it's like double --
23 say of a single pane of glass, it's like double-paning your
24 glass. Besides the shading coefficient aspect, you know,
25 you've put in another pane of -- of cloth, or whatever it

1 is. That would increase the U-value of the window, and
2 that U-value increase would make the product even much more
3 efficient, and that was not modeled when they modeled the
4 shading coefficients, either.

5 So I think this is a product which -- you know,
6 which is the most accurate way of modeling. It is simply
7 by taking the shading coefficient, which after all is
8 defined as the solar heat gain through the window into the
9 space. That's its definition. Whether the test procedure
10 is doing the right test, I suspect that it is, but I'd have
11 to study it with Bill to point out how it would be, but I
12 suggest that -- that by the definition, the test should be
13 taking convection into account.

14 CHAIRMAN SCHWEICKART: All right. Are there any
15 other comments on this item?

16 All right. I think we're back again, then, to
17 the issue of the desires of the Commission, or any
18 Commissioner comments. It would seem to me on a number of
19 different accounts that -- that we are dealing here with
20 the -- with several things.

21 In terms of operation, clearly the -- the question
22 of tight-fitting devices may be one which saves additional
23 energy, but it would appear as though the testing procedures
24 have included not only the reflection, but also the total
25 heat absorbed by whatever device and, therefore, whether

1 it gets into the house through convection or reradiation,
2 it is essentially accounted for in the evaluation of shading
3 coefficient. It would, therefore, appear to me, in addi-
4 tion to the problem raised by Mr. Eley, it would appear that
5 the last sentence proposed is in fact unnecessary, so
6 that's -- my own feeling would be to -- to delete that last
7 sentence from the proposal.

8 I think that the option to that would be to go --
9 to stick with what we have, but then we have the difficulty
10 of having the word "tight-fitting" still in the regulations,
11 and that leaves the building officials with the difficult
12 job of saying, well, what is and what is not tight-fitting,
13 so --

14 COMMISSIONER GANDARA: Yeah. Let me say that the
15 -- that the reason for the original Committee proposal was
16 in fact because of the difficulties that have been imposed
17 by the people who have commented here.

18 It is clear that the removal of the tight-fitting
19 is easier for the enforcement by the building officials.
20 It clearly is preferable from the point of view of design
21 for the, say, CCAIA in terms of material. From the point
22 of view of CBIA, clearly it's one added -- one less concern
23 and distraction in an element in building, so that when the
24 Committee reversed its position here with the staff's
25 recommendation, it was doing so in full knowledge that it

1 was against perhaps the views of a substantial number of
2 participants which had endorsed the earlier position, but
3 it was because of the Committee's belief that, on the
4 factual basis, that the staff had asserted that there was
5 more than a sufficient basis to -- in fact to include this
6 language.

7 So I would still support this language that you
8 have before you, but then again, you know, we can continue
9 to get the sense of -- of the Commission.

10 CHAIRMAN SCHWEICKART: Yes. Commissioner Edson?

11 COMMISSIONER EDSON: Well, I would be inclined
12 to continue to strike "tight-fitting" in the second line,
13 and leave off the final sentence. I was persuaded by the
14 testimony on the technical issues that the -- the heat gain
15 is, for the most part, anyway, a gain for --

16 CHAIRMAN SCHWEICKART: Commissioner Commons?

17 COMMISSIONER COMMONS: I concur with that.

18 CHAIRMAN SCHWEICKART: All right. The -- we're
19 moving on, then, to 2-5351(c)5., and here we're dealing
20 with continuous infiltration barrier. Are there any com-
21 ments for the Commission on that matter?

22 All right. There being none, we'll move on to
23 2-5351(c)7. --

24 COMMISSIONER GANDARA: That's --

25 CHAIRMAN SCHWEICKART: -- Heating System.

1 COMMISSIONER GANDARA: Okay. I would recommend
2 that that change there -- the current proposal is to -- is
3 the Committee recommendation for the strike-out, but also
4 to delete this last sentence, "Electric resistance or
5 radiant systems," et cetera.

6 CHAIRMAN SCHWEICKART: Okay. This then takes us
7 back to the earlier discussion this morning.

8 COMMISSIONER GANDARA: Um-hum.

9 CHAIRMAN SCHWEICKART: So the Committee recommen-
10 dation strikes --

11 COMMISSIONER GANDARA: The entire second para-
12 graph.

13 CHAIRMAN SCHWEICKART: -- the entire second para-
14 graph under 2-5351(c)7.

15 Are there any comments, then, on that? I see two
16 hands -- three. Yes. In the back.

17 MR. DONOHO: Good afternoon. My name is Len
18 Donoho, and my company is Cal Tech. I'm here representing
19 Therma Ray Radiant Heating, Incorporated, in Connecticut.

20 I wish to somehow clarify the differences of
21 electric resistance heating systems, and infrared radiant
22 heating systems, and propose that they make a difference in
23 the two types of methods of heating, electric resistance
24 being any type of a wall heater which is -- works on a con-
25 vection type of method, and something that works versus

1 radiant -- an ambient method and a radiant method, and dis-
2 tinguishing the two differences of heating.

3 In the radiant method, it's -- we're using the same
4 aspect as the sun.

5 CHAIRMAN SCHWEICKART: Excuse me. We need to
6 focus on this -- or at least I need to focus on what you're
7 saying, and I can't do it because I don't know whether you
8 are proposing additional language in this provision, or
9 whether you are objecting to a deleting, or -- could you
10 refer to the specific provision before us and introduce
11 what your comments are by stating what it is you desire
12 the Commission to do?

13 MR. DONOHO: Okay. In reference to the
14 2-5351(c)7., where it says "Heating System Type," and
15 throughout the entire provisions it comes back into a -- it
16 just distinguishes electric resistance heating systems. It
17 doesn't have any provision for radiant or infrared radiant
18 heating systems.

19 CHAIRMAN SCHWEICKART: All right. Are you aware
20 that there is an alternative component package which is
21 coming before the Commission which specifically addresses
22 that issue?

23 MR. RATLIFF: No, I wasn't. I requested some
24 information from the Commission, but I haven't received
25 anything on it. In reference to radiant heating systems?

1 To distinguish the difference between the two methods of
2 heating, ambient -- ambient method of heating and radiant
3 heating --

4 CHAIRMAN SCHWEICKART: Okay. To my knowledge --
5 perhaps Commissioner Gandara can speak to this, but is --

6 COMMISSIONER GANDARA: Okay. The --

7 CHAIRMAN SCHWEICKART: -- are electric resistance
8 and radiant heating both being dealt with in terms of the
9 alternative component packages which are coming before the
10 Commission?

11 COMMISSIONER GANDARA: Under the current provi-
12 sions the radiant heating is not treated any differently
13 from the electric resistance packages that will be coming
14 before the Commission.

15 For the purposes of the section before you, with
16 the modification I indicated to you, it says nothing about
17 electric resistance or radiant heating.

18 MR. DONOHO: So is there -- I would like to pro-
19 pose that we -- some more data, or a new language to include
20 infrared radiant heating systems.

21 COMMISSIONER GANDARA: Are you talking right now
22 about 2-5351(c)7.? Are you --

23 MR. DONOHO: Yes, and to -- or even in your new
24 component package that you're establishing you say that --

25 COMMISSIONER GANDARA: Okay. Well, there are two

1 different issues. I guess the question I have for you
2 right now was -- before the Commission is 2-5351(c)7. Do
3 you object to the language there in the first paragraph --

4 MR. DONOHO: Well, you just --

5 COMMISSIONER GANDARA: -- or would you --

6 MR. DONOHO: You just -- I did initially when
7 you said electric resistance heating system, and I wish to
8 propose that we change that, but then you deleted that.
9 Correct? At the last?

10 COMMISSIONER GANDARA: Right. There is -- there
11 is nothing that refers to electric resistance or radiant
12 heating now in this section.

13 MR. DONOHO: Right, in this section, but in the
14 future, is there anything today that we're going to cover
15 in reference to that?

16 COMMISSIONER GANDARA: No.

17 MR. DONOHO: I didn't see anything in reference
18 to it at all.

19 COMMISSIONER GANDARA: No. No, there is not.
20 The packages that are coming before the Commission are
21 electric resistance packages. We have listened to the
22 issue, the radiant heating parties, a number of times. We
23 have solicited -- I think your company must be the same one
24 Ms. Dana Battison has been representing for. We have
25 solicited a number of times. There's extensive

1 correspondence requesting that information.

2 Basically, to summarize it, because of the alleged
3 benefits of radiant heating, the radiant -- at least Therma
4 Ray's position has been that you would like preferential
5 treatment over the electric resistance heating.

6 MR. DONOHO: Correct. Correct.

7 COMMISSIONER GANDARA: Okay. The Commission's
8 position is that -- you know, you should submit the data
9 that would support such -- such a position by way of a
10 petition.

11 MR. DONOHO: It was submitted on January 18th to
12 the Commission. An additional --

13 CHAIRMAN SCHWEICKART: Excuse me. I would like
14 to -- I must compress this thing and try and stick with the
15 business before us.

16 What we're dealing with here -- let me try to
17 explain it. We're dealing fundamentally at this point
18 with Tables 2-53U1 through 2-53U16, which are in fact the
19 packages for the 16 climate zones, which now, as of the
20 action this morning, have no reference whatsoever in those
21 -- in those tables to electric resistance heating or
22 radiant heating. All right. There is no mention of the
23 word.

24 The provision that we're dealing with is one of
25 many which define the terms used in those tables. Since

1 there is no reference to electric resistance or radiant
2 heating, the issue before us is to delete this statement,
3 since it has no relevance. The issue which you're concerned
4 with is perhaps real.

5 We are dealing with that one, but not at this
6 moment, so I -- I don't want to take up unnecessary time
7 and end up not dealing with your issue. All right?

8 MR. DONOHO: Thank you.

9 CHAIRMAN SCHWEICKART: Are there other comments,
10 then, on this?

11 Yes, Mr. Ladine.

12 I hope I don't have to simply repeat that same
13 statement, Mr. Ladine.

14 MR. LADINE: The testimony does sound familiar,
15 doesn't it?

16 Bob Ladine representing RC Systems.

17 Just a clarification, since changes are popping
18 up here and there. I understand, then, that electric
19 resistance, radiant or convection, is excluded from con-
20 sideration in any of the A or C packages; is that correct?
21 In any of the zones.

22 CHAIRMAN SCHWEICKART: Perhaps Commissioner
23 Gandara can speak to it, but my -- as far as I know, there
24 are no changes before us today which in any way affect that.

25 COMMISSIONER GANDARA: That's correct.

1 CHAIRMAN SCHWEICKART: And certainly not the issue
2 before us right at the moment.

3 MR. LADINE: Well, it seems to me that there was
4 obviously being stricken here. I guess it was done in the
5 -- under consideration of .4, is that right, where these
6 -- this issue was basically resolved, is the way we referred
7 to it. I did request --

8 COMMISSIONER GANDARA: We'll be getting to the
9 footnote when we get to the tables.

10 MR. RATLIFF: Well, Commissioners, I think he's
11 referring to language that has been struck out in (c)7.

12 COMMISSIONER GANDARA: Okay.

13 CHAIRMAN SCHWEICKART: All right. Let me try and
14 clarify that.

15 In another couple of minutes, I hope, we're going
16 to be getting to the issue of the footnote on the tables on
17 the alternative component package tables, specifically
18 Footnote 2, which in its current form makes reference to
19 electric resistance or radiant heating systems. Okay?

20 At that time I think your comment may be appro-
21 priate, but I think the point here -- and I would hope that
22 we'd have your concurrence, Mr. Ladine, that if in no way
23 is electric resistance or radiant heating mentioned in
24 these tables, then it is appropriate to strike that mention
25 here.

1 MR. LADINE: I guess we'll just ask the question
2 later. I guess that's --

3 CHAIRMAN SCHWEICKART: All right.

4 MR. LADINE: -- the appropriate -- I did submit
5 a request to comment on Section 4, and for some reason we
6 were not afforded that opportunity. I guess it would not
7 be appropriate to comment on it at this time.

8 CHAIRMAN SCHWEICKART: Mr. Ladine, I'm sorry. I
9 asked if there were any comments at all, and I -- I went
10 through the list. Your name was under No. 5 --

11 MR. LADINE: And -- well, did you look at the
12 card?

13 CHAIRMAN SCHWEICKART: Yes, I did, and I have the
14 cards before me, if you'd like to check them.

15 MR. LADINE: Well, that's okay. I didn't expect
16 anything other than that.

17 CHAIRMAN SCHWEICKART: You certainly have the
18 opportunity to address this, and you can talk here, but let
19 me say that what we're talking about here is something
20 which there is no mention of this issue in these tables,
21 and, therefore, in the definition section, which defines
22 the terms used in the tables, it's totally inappropriate
23 to have it, so --

24 MR. LADINE: It was merely a question of what was
25 stricken in terms of zonally controlled. If you want to --

1 if that's not appropriate, since it was written here, or
2 was stricken, then to include something else, it's a ques-
3 tion of two zones versus multiple zones. I asked the
4 Committee to comment on those points at the last workshops
5 or hearings, but we -- in terms of setbacks, which was the
6 discussion earlier.

7 We don't refer to our equipment as setback. We
8 refer to it as set-up, because it is always set up in
9 either automatic or manual set-up, according to the usage.
10 We don't think that two zones are appropriate. We look at
11 the complete zones, and also wonder what consideration, if
12 any, might be given to full zone control with setback.
13 But that's past history, and I guess we'll deal with it on
14 the footnotes.

15 CHAIRMAN SCHWEICKART: Okay. Mr. Ladine, I owe
16 you a partial apology. On your card you have identified
17 both 4 and 5. I apologize.

18 Are there any further comments on -- yes.
19 Mr. Steel.

20 MR. STEEL: You -- I agreed earlier that it was
21 nonsubstantive to remove that sentence, and I -- and I
22 still concur that that's true.

23 However, there is a concept involved there that
24 I attempted to move that concept as an allowable concept
25 in the State of California, zonal control to save energy,

1 to move that concept over into Section H that we dealt with
2 in Item 4.

3 Perhaps because I had never brought the issue up
4 to the appropriate people before, even though I did submit
5 it to the last hearing, the issue hadn't been considered
6 well enough, but I think zonal control as a concept for
7 energy saving, as opposed to setback thermostats, is a
8 valid trade-off, and I would ask the Commission to consider,
9 however they have to do it, continuing this meeting after
10 it's all done on that one item of the amendment, to add
11 zonal -- zones, as an alternate to setback thermostats,
12 and if it turns out that then -- and we can check with the
13 Building Standards Commission if this is going to cause
14 any problem. If it's going to cause a problem with the
15 Building Standards Commission in getting these -- these
16 standards through their process, then we can just forget
17 about it at the next meeting, you know.

18 But if it's not going to cause them a problem,
19 perhaps we could have the opportunity to demonstrate why
20 zonal control should be considered as an alternative to
21 the setback thermostats, because when you go to the elec-
22 tric resistance packages later on, you've already set the
23 standards to not allow zonal control. It means you're
24 going to have to put a setback thermostat on every zone,
25 and that will get very expensive, because the requirement

1 says you have to have a setback thermostat in every heating
2 system, the one that you passed earlier today.

3 So I would just ask you if you would mind keeping
4 open, on the possibility that the Building Standards
5 Commission won't be disturbed by you giving them one more
6 amendment, allowing a substitution of zonal control, and
7 give us an opportunity to demonstrate that to you this week,
8 that that is a viable alternative to setback thermostats
9 in every zone.

10 CHAIRMAN SCHWEICKART: All right. Well, I think
11 the question here, and I would certainly want the
12 Committee's recommendation on it, clearly the issue of
13 zonal control as an emerging -- not just a radiant heating
14 or -- or electric resistance heating, but for --

15 MR. STEEL: Lots of things.

16 CHAIRMAN SCHWEICKART: -- all kinds of emerging
17 zonal control strategies are something which the Commission
18 needs to consider in terms of energy conservation. I think
19 the question which I certainly would want to address at
20 some point would be whether it makes sense to try and do
21 something rapidly within this proceeding by in any way
22 continuing it and risking the existing amendments that I
23 think are ready to move forward, or whether that's an
24 additional proceeding in which we need to renotify and have
25 a rather extensive set of hearings on, including new

1 technologies, and not just the ones which have so far found
2 their way into the record, but if you will, Mr. Steel, I'll
3 ask you to retreat, unless you have further comment on this
4 particular provision --

5 MR. STEEL: Well, I --

6 CHAIRMAN SCHWEICKART: -- because I think that's
7 a --

8 MR. STEEL: If I could, I just wanted to ask Dick
9 or you to ask Dick if in fact the -- couldn't you approve
10 all the amendments today and approve everything you're
11 going to approve, but leave that one piece of language
12 setting out as sort of a separate issue, but already having
13 been noticed, and -- and deal with it in 15 days, consider
14 the language that I submitted as a possible amendment that
15 you could consider in 15 days, so you'd pass the amendment,
16 as you've already done today, so you would have a set you
17 could submit to the Building Standards Commission, but you
18 would have an action which could be redealt with in 15 days
19 if you chose to.

20 I mean that would allow that option --

21 CHAIRMAN SCHWEICKART: All right. Let me --

22 MR. STEEL: I don't think this is a complex issue.
23 I don't think it's a complex issue.

24 CHAIRMAN SCHWEICKART: Mr. Steel, let me say this.
25 We are going to be -- at the end of these comments and the

1 Commission handling them, we are going to be facing
2 directly the issue, exercising our judgment as best we can,
3 how to package and deliver to the Building Standards
4 Commission something now, something in 15 days -- and/or
5 something in 15 days, and/or something in 45 or more days.
6 Your --

7 MR. STEEL: You've heard it. Thank you.

8 CHAIRMAN SCHWEICKART: Your desires are part of
9 that deliberation, but at this point I don't think it's
10 shedding any further light on this issue.

11 I would say clearly this is one where we have a
12 tie between this particular issue and the footnote which
13 we'll be dealing with in a few moments, and so we will need
14 to assure continuing consistency between those two provi-
15 sions.

16 Are there any other comments but for the issue
17 of the zonal control here on this?

18 All right. I take it, then, that the Committee's
19 -- again caveating with regard to consistency on the foot-
20 note which we'll be dealing with, that the Committee's
21 recommendation is supported.

22 2-5351(c)9, Domestic Water Heating System. Are
23 there comments for the Commission on that?

24 Yes. There are some in the back.

25 CHAIRMAN SCHWEICKART: Now that we've dealt with

1 the easy ones, we begin to get into the difficult ones.
2 Okay. Could I have perhaps comments from the staff, a
3 brief comment on this issue?

4 MR. HUSTON: Yes. Once again this was a clari-
5 fication to -- the old language I think was confusing
6 about what was the proper sizing criteria to be used for
7 the domestic water-heating systems to comply with Packages
8 A, B and C.

9 The staff has attempted, with input from the
10 public, to define exactly what it was that the staff used
11 in its analysis for Zones A, B and C -- excuse me, for
12 Packages A, B and C in each of the 16 zones, and that --
13 the assumptions used in that earlier analysis are accurately
14 then reflected in this statement, in these amendments.

15 COMMISSIONER EDSON: I have a question that would
16 help me.

17 Can you tell me why in the packages solar is
18 allowed in Packages A and B with any backup heat, and in
19 Package C only with gas backup heat?

20 MR. HUSTON: Yes. Basically in Packages A and B,
21 if the sizing criteria is met the -- if the backup system
22 is electric it will meet the budget, so if it's anything
23 different than electric it will also meet the budget. It
24 will be considerably under budget, but the criteria -- if
25 the sizing criteria is met with electric resistance backup,

1 it will then meet the budget of Packages A and B.

2 COMMISSIONER EDSON: Does the point system
3 allow you to take credit for that increased efficiency?

4 MR. HUSTON: As a function of --

5 COMMISSIONER EDSON: If you exceed the budget as
6 you described, using one -- fuel oil as --

7 MR. HUSTON: The point system, yes. Yes.

8 COMMISSIONER EDSON: In the point system you can
9 take advantage of that.

10 MR. HUSTON: I should point out that this section
11 that the amendments are proposed for deal only with the
12 alternative component packages.

13 CHAIRMAN SCHWEICKART: All right. Shall we then
14 take comment?

15 Yes.

16 MR. CAESAR: Thank you. My name is Philip Caesar,
17 and I'm the principal in a firm called Solar Energy
18 Consultants in Berkeley. I'm here representing CALSEIA.
19 I'm on the technical and standards committee for CALSEIA.

20 We want to make one -- I know you've talked about
21 this before, and this is the first time I've spoken with you,
22 so if I say anything you've already heard, you know, call
23 me and we'll try to keep it brief, but we had a provision
24 that was unfortunately a little obscure to begin with, and
25 in clarifying it I think unfortunately we've made it a

1 little more obscure, and technically incorrect in terms of
2 how solar systems work and how water-heating systems work,
3 and our attempt is simply to try to work with you to get
4 something that is clear and achieves your goals, but it's
5 also technically accurate in terms of how all these things
6 work and what is put in by the industry.

7 And I think you could take the language that you
8 have proposed and simply delete quite a bit of it and make
9 it much simpler, and have something that was both clear and
10 accurate.

11 The difficulty being that solar systems do one
12 thing only. They provide hot water, and they make no con-
13 tribution to pilot light losses and to storage tank losses,
14 and we're not so much concerned about the percentage, but
15 the percentage of what.

16 And if it was 60 percent, for example, of the hot
17 water demand, no one would have any trouble with that,
18 because that's what solar does. It provides hot water as
19 part of the hot-water demand, and we size systems accord-
20 ingly.

21 If it's 60 percent of what is in effect the bill
22 that the owner of the system has, that brings in a number
23 of variables that the solar does not contribute to.

24 COMMISSIONER EDSON: But doesn't the language say
25 60 percent of the water-heating budget?

1 MR. CAESAR: The proposed language says --

2 COMMISSIONER EDSON: Budget is a --

3 MR. CAESAR: Well, the proposed language, if we're
4 looking at (c)9, what I have says 60 percent of the energy
5 required for hot water demand, standby losses, and pilot
6 lights.

7 CHAIRMAN SCHWEICKART: No.

8 COMMISSIONER EDSON: I think you don't have the
9 language before us.

10 MR. HUSTON: We may be closer to agreement than
11 you think.

12 MR. HUSTON: Oh, oh. You may be closer than we
13 think. All right. Sixty percent of the annual water heat-
14 ing budget in Table C. Excuse me. I do not have the latest
15 language.

16 If the budget is simply the amount of hot water
17 that people are going to use, I'd have to look at the table.
18 Then we're probably in agreement and I can sit down. If I
19 could -- I'd like to take a quick look at the table, if I
20 may.

21 CHAIRMAN SCHWEICKART: All right. Is the other
22 comment directly in parallel, or do you have an independent
23 comment?

24 MR. MIZANY: Yes, it's parallel, and I was not
25 aware of the new --

1 CHAIRMAN SCHWEICKART: All right, fine. Let me
2 -- let me then just ask if the staff could sit down with
3 these two people to review it, and we could bypass and go
4 on to the next items, and perhaps dispose of them while you
5 have a chance, out of the spotlight, as it were, to con-
6 sider what we have.

7 MR. CAESAR: Appreciate that. Thank you.

8 COMMISSIONER COMMONS: I have a question.

9 CHAIRMAN SCHWEICKART: Yes. Commissioner Commons.

10 COMMISSIONER COMMONS: Well, what is the impact
11 if a system has 55 instead of 60 percent? Does it receive
12 zero credit, then, and -- I'm thinking of a house where an
13 owner might decide he wants to put in a solar credit, but
14 because of the particular lot configuration or the parti-
15 cular design of the house, the maximum you could get up to
16 was 55 or 59 percent.

17 MR. GAUGER: That would be acceptable if he went
18 to a performance approach. Basically what happens is, if
19 you want to go Package C, which has calculated into it the
20 60 percent of the solar -- water coming from solar, then
21 you would need to have the full 60 percent in order to meet
22 the budget.

23 But if you wanted a smaller system, it simply
24 means you have to use a performance approach rather than
25 Package C.

1 COMMISSIONER COMMONS: Would that not -- the 60
2 percent, water is related not to the size of the unit of
3 a building, but isn't it related more to the number of
4 people that live in a building?

5 MR. GAUGER: Yes. The water budgets that are
6 included in the performance approach are based upon a
7 standard water usage per dwelling unit. If in fact you
8 wanted to go out -- you know, if you had a bigger family,
9 you might want to get a bigger system than prescribed here.

10 COMMISSIONER COMMONS: Well, wouldn't that bias
11 this against smaller units having solar?

12 MR. GAUGER: The water value that we used was 50
13 gallons for a single-family dwelling per day, and 30 gallons
14 for a multi-family, and I think that is a relatively small
15 number, so I think in fact it is based upon a small build-
16 ing, and if a person had a bigger family or a bigger home
17 they might want to have a bigger collector than it actually
18 prescribes.

19 COMMISSIONER EDSON: My -- there is a related
20 issue. I think a problem with the approach that we have in
21 the standards is that the passive solar systems, which in
22 many cases are the lowest cost systems, are probably never
23 going to be able to meet the 60 percent factor, and my
24 understanding is that the industry is considering -- and I
25 hope to hear from them on it -- coming back to the Commission

1 with a proposed package that would allow those trade-offs.

2 MR. GAUGER: We might want to check when they
3 come back, but that's my understanding, they are going to
4 propose a package.

5 COMMISSIONER EDSON: I think, Commissioner
6 Commons, that goes to your concern, because those are in
7 some cases much less expensive, but also less efficient and
8 more able to meet the water demands of the small --

9 COMMISSIONER COMMONS: Yeah. My feeling is that
10 the way this is written is discouraging solar domestic water-
11 heating systems.

12 CHAIRMAN SCHWEICKART: All right. Let's move on
13 to 2-5352(c), Wall Insulation. Are there -- yes.

14 All right. CBIA wants to address this, and,
15 Arturo, would you like to present this to the Commission?

16 COMMISSIONER GANDARA: Why don't we hear
17 Mr. Ruby's comment, and then have the staff --

18 CHAIRMAN SCHWEICKART: All right. Fine.

19 COMMISSIONER GANDARA: -- have the staff respond.
20 I think we've gone around this one.

21 MR. RUBY: Earl Ruby, CBIA.

22 On the 4th of January I commented that I neither
23 agreed nor disagreed with the 2-5352(c)1., and the reason
24 we had no position on it was because we couldn't understand
25 what the requirement was.

1 In checking around with staff and with other
2 people, I find no one else really understands what it says
3 either. I would like to propose that, after the sentence,
4 "Framed walls shall be insulated between framing members
5 with insulation having an installed thermal resistance of
6 R-11 or greater," that we delete the rest of the paragraph.

7 The intent of that paragraph is to establish cer-
8 tain minimum mandatory requirements, and in the mandatory
9 minimum requirements checklist R-11 is -- is the minimum
10 for a framed wall, so I think we could eliminate some con-
11 fusion by just deleting the remainder of the paragraph after
12 "of R-11 or greater."

13 COMMISSIONER GANDARA: As I said before, we've
14 gone around this one a number of times, so, Mr. Gauger, let's
15 do it one more time.

16 MR. GAUGER: I think -- I take one exception. I
17 think it's clear what it says. It's not entirely clear why
18 it's in there.

19 MR. RUBY: Okay.

20 MR. GAUGER: No. It's one of those things that's
21 been carried along through the process, and I guess my
22 feeling is that the industry is sitting here asking us to
23 raise the standard, and it obviously will be an energy-
24 saving measure, and if the industry feels that it's an
25 appropriate standard, deleting that sentence would seem,

1 you know, acceptable, and --

2 MR. RUBY: Well, we like to save energy. Let's
3 do it.

4 CHAIRMAN SCHWEICKART: Well, it would sound, also,
5 as though -- if I understand it, and I think I do, it says
6 that a framed wall, you've got R-11, period. We've got
7 aboveground, belowground, whatever. It's R-11.

8 MR. GAUGER: That's what it would say if you took
9 that sentence out, and it doesn't say that now, for whatever
10 reason.

11 MR. RUBY: I think you could read it as saying
12 as R-11 belowgrade and R-7 abovegrade --

13 MR. GAUGER: Yeah.

14 MR. RUBY: -- which to my mind is, at best, in
15 reverse order, and at worst doesn't make much sense, so we
16 would prefer consistency in an R-11 wall.

17 COMMISSIONER GANDARA: The effect, it seems to
18 me that you're saying, is that, rather than R-7 in the
19 second sentence, you'd be putting an R-11.

20 MR. RUBY: That's correct.

21 MR. GAUGER: That's correct.

22 COMMISSIONER GANDARA: Is that what you're saying?

23 MR. RUBY: On a framed wall.

24 CHAIRMAN SCHWEICKART: Or even simply just delet-
25 ing the second sentence, which then simply says that all

1 framed walls would have R-11.

2 COMMISSIONER GANDARA: Well, but for the fact
3 that there was substantial discussion during the Committee
4 hearings as to whether frame walls meant -- you know, walls,
5 you know, above the -- aboveground, and in what is called
6 heated crawl spaces. That remained open, so that the
7 possibility exists without saying something about including
8 that, that you'd only frame those walls that are the
9 envelope of the building itself.

10 MR. RUBY: Well, remember that this is -- this
11 particular paragraph is in the mandatory requirement section,
12 so that the specification of R-11 wall by itself is a mini-
13 mum specification and normally would not meet the standard,
14 but it does introduce quite a bit of confusion as written,
15 and the R-11 would then be in alignment with the checklist
16 if we deleted those sentences.

17 COMMISSIONER GANDARA: And in those climate zones
18 where R-19 is required in frame walls, to put R-19 insula-
19 tion?

20 MR. GAUGER: Yes. Sure.

21 MR. RUBY: Yes.

22 MR. GAUGER: That's correct.

23 MR. RUBY: Because it's a mandatory minimum.

24 MR. GAUGER: Because this is a minimum mandatory.

25 CHAIRMAN SCHWEICKART: Well, I think the question

1 is would there -- were we to delete the last sentence under
2 No. 1, would there, in the mind either of building officials
3 or builders, be any confusion as to whether the insulation
4 required in framed walls apply to the dwelling itself,
5 the crawl space and the -- and a heated basement.

6 I seems to be clear, but I -- I was not --

7 MR. GAUGER: There should be no confusion if it's
8 a heated space and it's a frame wall that you have to have
9 a minimum of R-11.

10 MR. RUBY: Yes. The -- if your wall is insulating
11 conditioned space, regardless of crawlway, basement, or
12 whatever, the mandatory checklist already requires an R-11
13 minimum.

14 COMMISSIONER GANDARA: Let me see if the proposed
15 change -- I have a suggestion here that the --

16 COMMISSIONER COMMONS: Let me ask while you're
17 looking that up, would this be a substantive change and
18 require a 15-day notice, since we're increasing from R-7
19 to R-11?

20 MR. RATLIFF: Yes. I think this would require
21 15-day language.

22 COMMISSIONER EDSON: Mr. Ruby, what about simply
23 changing R-7 to R-11? Would that achieve the same thing?

24 MR. RUBY: No, because as the sentence continues
25 the R-7 application is for abovegrade.

1 MR. GAUGER: Basically the way it's written, what
2 would happen if you had a basement, you'd have -- with a
3 frame wall, you would have R-11 till you came to the ground
4 line. You would then have R-7 until you came to the rest
5 of the house, and you'd go back to R-77, and they're simply
6 proposing that we plug R-11 -- I'm sure that there's a lot
7 of rationale for why this is written that way.

8 CHAIRMAN SCHWEICKART: Well, it sure makes it
9 simpler for the builder, among other things.

10 MR. GAUGER: Much simpler.

11 COMMISSIONER GANDARA: Yeah.

12 COMMISSIONER EDSON: Well, they can always exceed
13 the standard, anyway.

14 COMMISSIONER GANDARA: Well, that was the reason
15 for the "at least R-7."

16 COMMISSIONER EDSON: Yes.

17 COMMISSIONER GANDARA: Okay. Which was the reason
18 when that was brought up. It could also be -- the following
19 could also be substituted, that "Frame foundation walls or
20 heated basements or heated crawl spaces shall be similarly
21 insulated above the adjacent outside ground line," period.
22 That basically says that the same insulation that you have
23 between the walls shall also be there in the crawl spaces,
24 but that it makes specific reference to the heated crawl
25 spaces. I think that's a way for your concern, so that --

1 so that what we have is the frame foundation walls of
2 heated basements or heated crawl spaces shall be similarly
3 insulated above the adjacent outside ground line, period,
4 and drop out the rest.

5 MR. RUBY: I think it's perhaps still more complex
6 than it needs to be, because we have really spoken to the
7 minimum requirement for framed walls as R-11, and then we
8 I think have said, as I understand your rewrite of the
9 second sentence, have also called for R-11 above ground
10 line, which we've done anyway by addressing a wall.

11 COMMISSIONER GANDARA: Perhaps you don't -- you
12 misunderstand me, Mr. Ruby. I'm just trying to include
13 some reference to the crawl spaces, and the -- in the heated
14 basement area, so that, as an alternative, if you don't
15 want the second sentence, would be that frame walls, comma,
16 including foundation walls of heated basements or heated
17 crawl spaces, comma, shall be insulated between framing
18 members, et cetera, and just have one sentence, the first
19 sentence.

20 MR. RUBY: That would be acceptable.

21 MR. GAUGER: Yeah. That might be clearer.

22 COMMISSIONER COMMONS: That would still be a sub-
23 stantial change, I believe.

24 MR. RATLIFF: Yes, Commissioner. I might add that
25 if the Commission wanted to go ahead and adopt today and

1 not renounce, that one alternative we might consider would
2 be, in our submittal, suggesting that we think that this is
3 a change that should be made, and that we would be inclined
4 to, on their direction, make such a change prior to publica-
5 tion. That would be consistent with what has happened in
6 the past.

7 That would also allow us to go ahead and adopt
8 today and submit.

9 CHAIRMAN SCHWEICKART: All right. I think -- are
10 there any further questions for Mr. Ruby, and are there
11 any further comments from the Commission?

12 MR. RUBY: Would that require renouncing then?

13 CHAIRMAN SCHWEICKART: Well, I don't want to
14 necessarily deal with that here. I mean we -- that's a
15 question we're going to have to deal with with all of this
16 when we reach the end.

17 COMMISSIONER COMMONS: I have one question on it.

18 CHAIRMAN SCHWEICKART: Yes. Commissioner Commons.

19 COMMISSIONER COMMONS: I put up an addition
20 recently, and I put in no air conditioning or heating, but
21 I also did not go to the particular R level that you might
22 have wanted. Would I have been required to, if I were to
23 have constructed this addition subsequent to July 1st?

24 MR. GAUGER: Yes, you would. If you added heated
25 space to your house.

1 COMMISSIONER COMMONS: It's not heated.

2 MR. GAUGER: Is it conditioned space?

3 COMMISSIONER COMMONS: Nonheated space.

4 MR. GAUGER: It's nonheated space if -- no. If
5 you do not heat that space -- but if you took a wall out and
6 made a room bigger, you would in fact have heated space that
7 you've added and then you would have to --

8 COMMISSIONER COMMONS: No. Nonheated, non-
9 air-conditioned, so it does not apply.

10 MR. GAUGER: No. These standards would not apply
11 to that, that situation.

12 COMMISSIONER COMMONS: Okay.

13 CHAIRMAN SCHWEICKART: All right. If there are
14 no further questions, then I would -- I take it that the
15 sense of the Commission would be the -- the rewording as
16 suggested by Commissioner Gandara picks up the intent of
17 all.

18 COMMISSIONER COMMONS: No, I would -- I prefer the
19 way it stands.

20 CHAIRMAN SCHWEICKART: All right. Nevertheless,
21 the sense of the Commission, the majority of the Commission
22 -- Commissioner Edson, let me ask where you are.

23 COMMISSIONER EDSON: I agree with the proposed
24 change by Commissioner Gandara.

25 CHAIRMAN SCHWEICKART: All right. Let's move, then,

1 to -- or are our solar people ready?

2 Not yet. All right. Let's move to 2-5352(e),
3 Vapor Baggers. Are there any comments for the Commission
4 there?

5 All right.

6 COMMISSIONER GANDARA: Let me just note for the
7 Commission that this is the resolution of the -- was it the
8 Mendocino County petition?

9 CHAIRMAN SCHWEICKART: Oh, yeah.

10 COMMISSIONER GANDARA: Fort Bragg? Okay.

11 CHAIRMAN SCHWEICKART: All right. Table 2-53R.

12 COMMISSIONER GANDARA: Okay.

13 CHAIRMAN SCHWEICKART: Mr. Eley, of course.

14 COMMISSIONER GANDARA: Let me --

15 CHAIRMAN SCHWEICKART: And others. And Mr. Steel.

16 COMMISSIONER GANDARA: Let me just ask that -- a
17 comment here on the basic changes presented by 2-53R,
18 including the budgets on the -- all others, as well as the
19 footnotes. I -- I think we should probably separate the
20 issues into the budgets, and then to the footnotes. I think
21 those are separable, because the footnotes raise largely the
22 issues of the -- of the duct losses, I imagine it's
23 Mr. Eley's concern, and the budgets are -- the change in the
24 budgets is another issue, which is really Mr. Eley's request,
25 which I believe that he probably doesn't disagree with that,

1 SO --

2 CHAIRMAN SCHWEICKART: All right. Then let me
3 ask, are there comments, then, vis-a-vis the budgets,
4 rather than the footnotes, in 2-53R?

5 All right. We have Mr. Ladine. Commissioner
6 Commons, do you have a question, or --

7 COMMISSIONER COMMONS: Well, I -- this is one of
8 my major areas of concern, and I've discussed it with
9 staff. The assumption here was -- correct me -- that we
10 used a base of 1320 or 1380 feet, and we made the assump-
11 tion that the budget should go up and down, based on an
12 exact 1.0 change in the size of the structure for your heat-
13 ing and cooling.

14 I've heard no discussion, and in looking at the
15 testimony I've seen no testimony why it should be 1.0 rather
16 than .9, or 1.1, and it seems like 1.0 is arbitrary. In
17 fact, I think the real world is that as a building goes up
18 in size, that the amount of heating and cooling per square
19 foot actually goes down, and that there's a bias in this
20 for larger structures, and it might be more difficult for
21 smaller structures.

22 So I have an overall concern with the assumption
23 that it's 1.0 thousands of Btu per square foot of condi-
24 tioned space.

25 Now, part of that did come up here, I think, in

1 the discussions, because multi-family buildings tend to
2 have smaller units than single-family dwellings, and one of
3 the reasons for the modification was because of the multi-
4 family buildings, but I think we have a basic assumption
5 without any -- without any justification here.

6 I recognize that this might not be able to be
7 corrected in the 15-day period or in the 45-day period.
8 My recommendation is to give this issue back to the
9 Committee, and I understand that the Committee did have some
10 substantial changes requested in their November and in
11 their January hearings, and that their statement would be
12 that what we're trying to do at this time is clarify the
13 language, and that as soon as this is done that the Committee
14 would then review some other changes to that, and if the
15 Committee were willing to take that under consideration and
16 reopen the Committee hearings after we have finished that,
17 that would take care of my concern.

18 COMMISSIONER GANDARA: Let me indicate that this
19 issue which was brought up in the -- under the guise of the
20 aspect ratios, indeed one of the reasons for the change
21 that's being proposed. On the other hand, these are the
22 ACP's, and that the Commission should be aware that sometime
23 ago when the point system was being deliberated, at that
24 time it was proposed that, with respect to the single-
25 family dwellings, that there would be a correction factor

1 which accounted for those elements in the point system.
2 It was the major input by all parties, CCAIA, CBIA, and
3 other interested parties at the time, that a major policy
4 decision be made that with respect to that element that that
5 not be changed in the point system, because it would appear
6 that we would be having -- even though it was actual --
7 actually good physics, would be bad policy of setting larger
8 square footage zones over small square footage zones.

9 Notwithstanding that, at that time it was decided
10 that we would not undertake that sizing element into account
11 in the point system.

12 On the other hand, I do believe that it is there
13 in the performance method, so anybody who wishes to so --
14 who wishes to get credit for those elements indeed can use
15 the performance method.

16 With respect to the packages, then it seems that
17 one way of accommodating that difference is in fact the
18 change that is being suggested here.

19 If I have misstated anything, Mr. Gauger or
20 Mr. Huston, please chime in, but at least with respect to
21 what has been before the Committee, that was an early issue,
22 unless I misunderstand the question, and that indeed the
23 Commission should be receptive to any proposals, any peti-
24 tions for changes.

25 COMMISSIONER COMMONS: Well, I think you can say

1 that, in essence, I've made a petition. If you would like
2 I'll put it in writing, but when we talk about 1380, and
3 we're now talking about building homes in the 700 and 690
4 square-foot range, essentially you have dictated that the
5 energy budget would be exactly half, and on the other -- on
6 the other side we have allowed for those homes that are
7 three, four, five thousand square feet, and we've allowed
8 energy budgets that are going to be excessive.

9 So I think we have created a problem, particularly
10 for low-income homes, and in those areas where on the very
11 larger dwellings we have probably not been as fair, and I
12 think it's a significant problem, and I don't have a resolu-
13 tion for you today, but it's one I request that the
14 Committee, after we finish these hearings, as they said
15 they would do in November, reopen the Committee for sub-
16 stantial changes that are beyond that which we can take care
17 of now, and take a further look at it.

18 COMMISSIONER GANDARA: Well, Commissioner Edson
19 has suggested earlier that we indeed accumulate these
20 requests for petitions and do them, you know, once a year,
21 which I think the Committee has always indicated a desire
22 to do so.

23 But at the same time I think one also has to
24 recognize there are some resource constraints, and that
25 these are hard trade-offs that are made, you know. Again,

1 it would be whatever the Commission's desire may be, but I
2 would recommend to the Commission that we get these set
3 of standards under our belt first, and that after that that
4 there would be certainly at the Commission's own initiation,
5 but more importantly for substantial changes to these that
6 we rely on petitions from interested parties.

7 CHAIRMAN SCHWEICKART: All right. I'd like to
8 move forward.

9 Mr. Ladine?

10 MR. LADINE: A brief comment as to the heating
11 load calculations are based on a convection or hot-air
12 mentality, so to speak, and do not reflect the budgets that
13 have -- are historically validated through radiant and
14 infrared systems, which information has been submitted and
15 had testimony and in written form, and some consideration
16 at some point where we would find a modification both in
17 equipment sizing and in Btu's per square foot per degree
18 day, which I said has been and can be addressed through
19 historical means, through previously-submitted testimony.

20 Unless there are any questions --

21 CHAIRMAN SCHWEICKART: I have no questions.

22 Commissioner Commons?

23 COMMISSIONER COMMONS: Do you have a recommenda-
24 tion?

25 MR. LADINE: Well, there are two ways to approach

1 it. The staff on a couple of occasions has tried to
2 address the issue through some general considerations or
3 values, who reflect some of that seasonal performance
4 efficiency.

5 Another approach would be by recognizing some of
6 the engineering variables and trying to model those through
7 the computers or a simplified calculation method.

8 One of the problems is in the appliance efficiency
9 end, that there are no test procedures for the efficiency
10 of any type of heating equipment for a performance effici-
11 ency or a seasonal efficiency. There are some ways to
12 verify these values, Btu values, energy budgets. It would
13 be through some -- actually, it's a test procedure the
14 Bureau of Standards identified some 30 years ago. It's a
15 testing of this base-case structure under controlled con-
16 ditions, which could serve as a verification for these
17 energy budgets, as well as address some of the issues we've
18 raised about the performance efficiencies of heating equip-
19 ment.

20 We've been waiting for an opportunity to dialogue
21 on some of these, as well as discuss the historical analysis
22 of it.

23 COMMISSIONER COMMONS: Every time we've had a
24 hearing on the subject this matter has come up, and it
25 clearly hasn't been addressed adequately, partially I think

1 because of the problems you're mentioning, and it appears
2 to me that we may have a bias against certain types of
3 heating systems through the standards.

4 I think what I would suggest to you is that you
5 petition the Commission to consider this. It's certainly
6 something we're not going to grapple with today, but you're
7 at least the fifth or sixth person who have come in from
8 different areas and different sources to have raised this
9 question.

10 If there is a way to grapple with it, I think
11 it's the responsibility of the Commission to do so, because
12 it may be in the interest of both saving funds of people
13 building homes and to saving energy that it be considered.

14 MR. LADINE: I think that the next points for
15 consideration dealing with duct losses and things are an
16 indication of some of the problems that arise out of system
17 evaluation versus equipment evaluation, and zone control
18 is another one, as well as what are the criterion for per-
19 formance, what are the conditions that identify what a
20 heating system is supposed to be.

21 All appliances have some type of a performance
22 test, those that are identified as energy consumers, except
23 for heating equipment. They do not have a standardized
24 test that reflects the performance relationship, and --
25 that's all I really have to contribute to that, other than

1 the budgets for the heating element are considerably off
2 base, not to mention the multiplying factor of it, of the
3 source energy.

4 But in infiltration losses, air temperatures,
5 some of the other relationships that go in with the dif-
6 ferent types of systems.

7 CHAIRMAN SCHWEICKART: Thank you, Mr. Ladine.

8 Mr. Steel?

9 MR. STEEL: I have concurred in the past and con-
10 cur now with Commissioner Edson's idea of a time slots and
11 procedures and, as Commissioner Gandara said, collect for
12 six months everybody's petition, but you ought to let
13 people know to submit them and, you know, give them a
14 period of time to submit them, and then have hearings on
15 all those that are submitted, and none others, kind of
16 thing, and do it again in a year.

17 And I think Mr. Commons' suggestion is one of the
18 ones that could be considered at that time, but right now
19 I would just simply -- I have submitted the -- am I being
20 illegal if I go down to the lower footnoes at this point?

21 CHAIRMAN SCHWEICKART: Yes, you are.

22 MR. STEEL: All right.

23 CHAIRMAN SCHWEICKART: All right. I believe then
24 we essentially have no controversy on the tables.

25 All right. Now we're going to go to the lower

1 tables.

2 MR. STEEL: I provided the wording for those
3 2, 3 and 4 footnotes, and it was provided over the phone,
4 and there was a -- there's a clarification that I'd like
5 to make that is what my original intention was, but it
6 just didn't get put across on the phone, where -- in each
7 of the footnotes where you see the factor down there, and
8 each of the footnotes it says, parentheses, zero point --
9 in the first footnote, .15, parentheses. In the second
10 footnote it says .10, and the third footnote it says .05.
11 I would like to have those changed, for clarification, to
12 the words -- and this is on my handout that I gave you
13 earlier, to the words fifteen -- the first one 15 percent
14 times -- the one-five, percent spelled out, and the word
15 "times" substituted, and I consider that an editorial
16 change.

17 It -- but the reason for doing it is that it's
18 not clear the way it's written here whether you're supposed
19 to multiply this factor times the budget, which is what
20 you're supposed to do, or just add this number to the
21 budget, what you're not supposed to do, but if you use
22 the words "15 percent times," it follows the first sentence,
23 and it becomes clear that you're supposed to multiply this
24 factor times the budget.

25 I will note that we've had quite substantial

1 discussions with staff on this issue of -- of whether these
2 numbers should be put into footnotes or actually just put
3 the duct losses, the 15 percent for single family, right
4 up into the budgets, and it was concluded by the
5 Committee, I believe, that we should put them into the
6 footnotes rather than the budgets so that the budgets
7 wouldn't change and you wouldn't have to explain any
8 changes in the budget numbers.

9 And although we -- I feel that that is -- is not
10 the ideal long-term solution, I think that it might be an
11 expedient current solution, and so the people who I'm
12 representing in this, which is the Thermal Insulation
13 Manufacturers Association, who want extra duct insulation
14 rated, were satisfied with the three footnotes as allowing
15 extra duct insulation to be rated.

16 CHAIRMAN SCHWEICKART: Mr. Steel, let me -- I
17 hate to be a grammarian, but it would impress me that a
18 more direct and less confusing amendment would be "increase
19 to 1.15 times" -- well, just one point -- "increase to
20 (1.15)," and "increase to 1.10 --

21 MR. STEEL: We would --

22 CHAIRMAN SCHWEICKART: -- and 1.05.

23 MR. STEEL: We would certainly concur with that
24 as a -- we just want to clarify it -- clarify that.

25 MR. GAUGER: Mathematically, I think that's

1 better than a percent sign in the middle of an equation.

2 CHAIRMAN SCHWEICKART: Yeah.

3 MR. GAUGER: That gets a little awkward.

4 MR. STEEL: Okay. We would concur with that. We
5 -- this will primarily be used to be a definition which
6 we'll then use in the point system to calculate points, so
7 we know what it means, but -- as long as it's clear, that's
8 fine.

9 CHAIRMAN SCHWEICKART: All right. Well, I think
10 your calling it to our attention is a good point.

11 MR. STEEL: Thank you. I would consider that an
12 editorial change, because it's the same equation. It's
13 just a way of writing it to be more clear.

14 CHAIRMAN SCHWEICKART: Mr. Eley?

15 MR. ELEY: I have -- I have three points to make
16 on the issue of these footnotes.

17 The first point is that those -- those numbers,
18 15 percent, ten percent and five percent are questionable,
19 and I'll be specific about that in a minute.

20 The second point is that we should include duct
21 losses in the published budgets themselves, rather than
22 trying to indirectly include them through these footnotes.

23 And the third point is that those -- those
24 formula at the bottom there, while valid, probably don't
25 belong in the regulations.

1 So let me start first with the issue of those
2 values, 15 percent, ten percent and five percent. There --
3 this whole issue of duct losses is really a kettle of worms
4 that the staff tried to avoid in the standards development
5 process, and it's been raised now in an effort to justify
6 electric resistance heat.

7 We have a standard house that has ducts. Okay?
8 That's the basis of their standards. The implication here
9 is that it's cost-effective to reduce duct lossage to 15
10 percent in single-family detached, ten percent in attached,
11 and to five percent in multi-family.

12 This is -- this whole business of duct losses is
13 one that's not well understood. There's not good analytic
14 tools for evaluating it, and so forth. In the absence of
15 analytic tools and data, it's been the practice of the
16 Commission to rely on a concensus process.

17 I would contend that there is probably a concen-
18 sus that 15 percent is a reasonable value for single-family
19 detached. I would suggest that the ten percent and five
20 percent figures for attached and multi-family, respectively,
21 are at best guesses, and in my opinion are arbitrary
22 guesses, based on no data that I have seen or no analysis
23 that I have seen.

24 We recommend, therefore, that the values -- I
25 mean we have our own guesses as to what those could be, I

1 suppose. The actual duct losses in buildings, of course,
2 depend on lots of things, and I tried to summarize this in
3 a letter I sent earlier. It depends on the -- it depends
4 on the duct surface area, the amount of duct insulation,
5 the air leakage characteristics of the ducts, the pressure
6 difference between the inside of the duct and its ambient
7 conditions, and the temperature difference between the air
8 on the inside of the duct and the ambient temperature,
9 and it also, of course, depends on how much of those ducts
10 are located within unconditioned space versus conditioned
11 space.

12 We see no reason to believe that the duct losses
13 in single-family attached would be any different at all
14 from detached. There's absolutely no reason that I can see
15 that they would be any different.

16 The only difference is you've got common walls,
17 but you still have those ducts located in an attic space,
18 typically, or in a crawl space, but they are treated iden-
19 tical in single-family attached as detached, so whatever
20 number that we use for detached housing should be applied
21 similarly to attached housing.

22 So, since there is, I believe, from your earlier
23 presentations, some loose consensus that 15 percent is
24 reasonable for detached, I would suggest that that also be
25 used for attached.

1 On the issue of multi-family, there is reason
2 to believe that the duct losses are smaller in multi-family
3 than in the other building types, because commonly multi-
4 family ducts are located, either partially or wholly,
5 within the conditioned space. In apartments, those ducts
6 are typically located in a corridor where the ceiling is
7 lowered, or they are located in some other means, so that
8 whatever -- whatever heat losses or gains occur, occur
9 with the conditioned space around it, so they can be
10 ignored or neglected.

11 So there is a case that the duct losses in multi-
12 family buildings should be less than they are for attached
13 or detached housing.

14 I have no rule of thumb to offer other than just
15 a guess of maybe ten percent, but it's -- it's clearly, in
16 my opinion, reasonable to assume the same duct losses for
17 detached and attached housing. I don't see any reason
18 that those should be any different.

19 And there is a case that multi-family should be
20 smaller. Ten percent would probably be a reasonable num-
21 ber.

22 Okay... The second issue that I'll address is the
23 issue of whether or not these footnotes should be included
24 or whether you should just increase the budgets, and I
25 suggested an amendment. What I would prefer to do is strike

1 Footnotes 2, 3 and 4, and instead include a Footnote 2 that
2 simply says, "These budgets include duct losses of 15 per-
3 cent for single-family detached and attached, and 10 per-
4 cent for multi-family." That's all you need say, and then
5 go up into the budget numbers and increase them by 15 per-
6 cent in the case of detached and attached, and by 10 per-
7 cent in the case of multi-family.

8 This in my opinion is not a substantive change,
9 because you've done that anyway through your footnotes,
10 but the whole purpose of these hearings are to clean up the
11 standards, and I think by adding three lengthy footnotes
12 such as this, we're not cleaning up the standards, but
13 we're making them more difficult to interpret and read.

14 Now, the third -- the third point is the issue
15 of the formula itself. We don't have any formulas down
16 here telling you how to calculate solar gains in the build-
17 ing, or we don't have any formulas telling you how to deal
18 with -- with conduction through the roof, or any other
19 issue related to calculating energy consumption but, rather,
20 we have a Section 2-5351 that says you must use a, quote,
21 certified calculation procedure.

22 So, in my opinion, you don't need to tell people
23 here how to calculate duct losses. That's the business of
24 the design manual.

25 I have no quarrel with the formula, other than

1 one addition that I would suggest. This particular formula,
2 which was suggested by representatives of the people that
3 insulate ducts, gives them credit for insulating ducts. It
4 does not account for the question of how much of those
5 ducts are located within conditioned space.

6 If you added another parameter here, which was
7 the percent of ducts located within unconditioned space, and
8 let that be also a multiplier, then you deal with that, and
9 that would be my suggestion for the formula, but again I
10 don't think the formula belongs in the standards.

11 CHAIRMAN SCHWEICKART: Commissioner Commons?

12 MR. ELEY: Those are the three points I wanted to
13 make.

14 COMMISSIONER COMMONS: If you look at No. 3, and
15 you do the formula, it doesn't come out to ten percent.

16 MR. ELEY: Well, I --

17 MR. GAUGER: That's correct. It shouldn't. This
18 is credit for additional insulation above what's already
19 required.

20 MR. ELEY: I think if you --

21 COMMISSIONER COMMONS: Then the first sentence
22 shouldn't be ten percent. You either have to use the
23 formula or the ten percent, I think.

24 MR. STEEL: Can I make a comment on this? I did
25 those formulas.

1 The concept, like in the first one -- let's go
2 to the 15 percent one, the first, Footnote 2. The 15 per-
3 cent is how much that staff wanted to give to duct losses,
4 15 percent of the budget. Okay?

5 The formula gives no credit to duct losses if
6 you put in R-2.1 duct insulation, which is what's in
7 Chapter 10 of the Uniform Mechanical Code. That's the
8 standard for California, 2.1. It gives no credit for duct
9 loss -- you know, no extra energy up there for duct losses
10 if you have that kind of insulation.

11 Now, if you go to infinite insulation, this num-
12 ber goes then to the 15 percent, so the -- this is the
13 correct formula for dealing with conductive heat loss
14 through ducts, adjusting for insulation, going for no addi-
15 tion to the budget if you put the minimum required by Code
16 to the total that you get if you put infinite -- you know,
17 huge insulation on the ducts, you get the total that they
18 are allowing for no ducts.

19 COMMISSIONER COMMONS: Now that clears up the
20 ambiguity. What you're saying is the first sentence should
21 say "may be increased by 15 percent, based on the formula
22 below."

23 MR. STEEL: Well, no. See, the top sentence
24 refers to no ducts at all, which is exactly equivalent to
25 having infinite-insulated ducts. If your ducts are

1 insulated so they don't lose any energy, it's the same as
2 having no ducts, so they both get 15 percent. The top
3 sentence says no ducts, and the second sentence says
4 insulated ducts with variable insulation.

5 But that second sentence comes to the same thing,
6 15 percent, when you go to infinite insulation, so there's
7 no heat loss from the duct.

8 MR. ELEY: I think the -- the other issue here
9 is cost-effectiveness, and the implication is that, as I
10 said earlier, that it is -- that it's cost-effective to
11 reduce duct losses to these percentages, 15, ten and five.
12 There -- and again I would just make the point, there's
13 been no data to support this.

14 I mean we -- we didn't do the kind of analysis on
15 duct losses that we did, for instance, on wall insulation
16 or double-glazing, or any of these other parameters, so
17 we have to rely on more of a consensus process here and,
18 you know, I -- I've polled a lot of the people around the
19 room, and I simply don't believe that a consensus exists
20 that these are the right numbers.

21 CHAIRMAN SCHWEICKART: Let me understand what the
22 impact would be if the footnotes were just deleted, on the
23 grounds of no -- inadequate record --

24 MR. ELEY: And not change the tables?

25 CHAIRMAN SCHWEICKART: -- to establish something

1 of this kind. We go back up to the table above, and the
2 budget is the same for all houses, whether the ducts are
3 internalized, externalized, or not, and we have a duct
4 insulation standard of R-2.1 on all ducts and unconditioned
5 space. Is that what we end up with?

6 MR. ELEY: Yes. The only problem then is one of
7 equity, you see, because you've allowed electric resistance
8 heaters to trade off against duct losses. Now, if you're
9 going to do that --

10 CHAIRMAN SCHWEICKART: Well, where --

11 MR. ELEY: -- I may choose in a building design --

12 CHAIRMAN SCHWEICKART: Where have we allowed that,
13 now?

14 MR. ELEY: Well, in the packages. That's the
15 way the electric resistance packages were justified.

16 CHAIRMAN SCHWEICKART: All right.

17 MR. ELEY: They -- they --

18 CHAIRMAN SCHWEICKART: That hasn't come before us.

19 COMMISSIONER GANDARA: Those are not before us
20 today. No.

21 MR. GAUGER: Commissioner, the basic problem is
22 that if we did what you suggest, the budget numbers are
23 actually -- you know, if you assume the 15 percent is cor-
24 rect, the budget numbers are 15 percent low, and we would
25 want to change those numbers and increase them by 15 percent,

1 and -- and I think the staff agrees that in a long term;
2 that when we go through a rework of the budget numbers
3 themselves, taking into account a lot of the things that
4 have been mentioned today, we would do that.

5 The concern we have is -- it must be obvious just
6 in the short discussion that duct loss calculations are
7 not simple and very precise, and there's a lack of informa-
8 tion, and the staff has taken the position that, until we
9 know more and we've got a chance to go through the full
10 analysis, that it's better to recognize they are not there
11 -- not ask people to do that calculation, and just recog-
12 nize that if you don't have ducts you get some savings,
13 because that will be a small number of people, as compared
14 to the people who will do -- that have ducts involved.

15 COMMISSIONER EDSON: Can --

16 COMMISSIONER GANDARA: In terms of the Committee's
17 consideration, the other element you have to add here is
18 that by removing the footnote with respect to electric
19 resistance, which can just be utilized, which in essence
20 was perhaps even more arbitrary than what is presented to
21 you here, that you have to have some kind of proposal or
22 solution dealing with duct losses.

23 Okay? So that -- you know, the problem would be
24 raised, as Mr. Eley says, of are you fair to one heating
25 system, and yet not -- and yet also be fair to another one.

1 The -- this gets back to the issue of whether the proper
2 way would be -- whether in the footnotes or in the tables
3 the Committee dealt with that. The -- it was based on the
4 expected utility or usage, but beyond that, I think there
5 was also another element, is that not all the changes could
6 be clearly a result for -- result in a better use or a
7 simpler use, and clearly this is a complication that is --
8 that is difficult to understand.

9 But certainly there are changes that are required
10 by simply the expected issuance of the packages DNE or the
11 electric resistance package, so you have to balance both
12 cleaning up for ease of use, as opposed to having to make
13 changes in conformance with other expected changes, and so
14 that's what this represents here.

15 COMMISSIONER EDSON: I'd like to ask the staff
16 to respond to the reason for the difference between single-
17 family detached and single-family attached.

18 MR. HUSTON: Basically, the 15, ten and five per-
19 cent were numbers that people talked about when the stan-
20 dards were being developed some years ago, the idea being
21 that, with single-family, probably all of the ductwork --
22 or with single-family detached, probably all of the ductwork
23 was in unconditioned space and would, therefore, represent
24 a 15 percent loss.

25 In the single-family attached, some of the

1 ductwork was probably in conditioned space in the common
2 walls, or someplace, and probably a third or so of the
3 ductwork was in conditioned space.

4 In multi-family, because there were common walls
5 and common ceilings, probably only five percent, or a third
6 of the ductwork was in unconditioned space, so it would
7 have only one-third the loss of single-family.

8 As Charles has pointed out, the numbers are not
9 precise. They are kind of concensus numbers that the staff
10 proposed at the very first committee hearing, and we
11 received some additional comments after that first hearing,
12 and again at the second hearing, generally people not being
13 able to offer any more -- more precise numbers, but tending
14 to concur with those that the staff had proposed.

15 I would have to reiterate what Charles has said
16 and what Bart has said. I think this is the first step
17 of really evaluating duct losses, and that there's more
18 work to be done here before we actually include precise
19 numbers into the budgets.

20 This is a step to allow us to evaluate electric
21 resistance packages, and to provide some incentive for
22 people to further insulate their ducts in what the minimum
23 of the Code requires.

24 There are certainly more considerations that the
25 staff and the public are going to have to deal with in later

1 amendments.

2 COMMISSIONER GANDARA: Let me add, Commissioner,
3 that the Committee in this case -- well, the Presiding
4 Member in this case opted -- since I'm talking on behalf
5 of the Committee -- opted for policy consistency, at least
6 what had been presented to be policy consistency, between
7 the earlier proceedings and what was being proposed here,
8 in the absence of anybody coming forward and proposing
9 anything better, better substantiated, and frankly something
10 other than "We don't like what you did, do something else."

11 The other point is that at some point we do have
12 to settle up writing. We have these electric resistance
13 packages that have been long in the making, and we do need
14 to make certain assumptions about duct losses in order to
15 have those packages proposed and accepted, and to the extent
16 that what we have here is not really in full agreement,
17 because I must say Mr. Eley's position has been consistent
18 on this throughout, and I think he raises some valid points,
19 and some valid counterpoints can be raised, the issue of
20 modeling that part is going to be very difficult if, you
21 know, we can -- you don't even have assurance that the --
22 that a system with a lengthy number of feet for ducts,
23 depending on how it's insulated, may not in fact be more
24 energy-efficient than a short one that isn't. The issue
25 of the budgets, you know, should the changes be in the

1 budgets or be in the footnotes.

2 That gets to the issue of do you put the burden
3 on those who don't wish to have the duct losses added, to
4 doing the calculation or subtraction, or let somebody else
5 do the addition.

6 The other issue is really whether you're talking
7 about source energy, are you talking about the energy that
8 goes to the envelope, which again becomes another -- another
9 issue.

10 It's the balancing of the complex sort of issues
11 that, for the moment, without this kind of -- some kind of
12 resolution by the Commission today, you know, would really
13 prevent any further development of the electric resistance
14 packages, and the concensus reached there with respect to
15 highly-attractive packages with R-16 in the ceiling, and
16 it's -- it's that kind of problem. You have to balance
17 these factors.

18 CHAIRMAN SCHWEICKART: Commissioner Commons?

19 COMMISSIONER COMMONS: I'm a little concerned
20 when I hear on the one hand staff saying to me that, well,
21 we have that 1.0 unity, but we don't have the staff time,
22 and we really can't get around to doing that, which is a
23 major issue, and then on this, which really isn't as sig-
24 nificant an issue in terms of the one affects everyone,
25 saying, well, this is our first cotton. When we get around

1 to it we'll change it again.

2 The real world is this isn't going to be changed
3 in the near future, and it's continuing what I said at the
4 opening of the hearing, is are we going to really try to
5 just accept what the staff has done, and that's the only
6 choice we have, or we get back to the process question,
7 which is sitting over us the whole way, and I can see the
8 resistance on the other Commissioners, if something is a
9 substantive change it's not going to get through today,
10 and that's what really is occurring.

11 The evidence that I've heard here, at least as
12 far as the apartments is concerned, the last category, I
13 cannot believe that there's a one-third savings from the
14 apartments versus the single-family dwelling, and if you
15 want to argue if the ten should be ten or twelve and a
16 half, that there's some drop, I can see that. I just don't
17 believe, and I don't think there's anyone in this room who
18 believes that you go from 15 to five on a single-family to
19 an apartment.

20 And it's a substantive change, and I've heard
21 just no testimony to justify it.

22 MR. ELEY: Well, I would like to make just one
23 final point, and that is that, you know, whether we include
24 these numbers in the footnotes or in the budgets themselves,
25 they are there and they are precise, and we can't ignore

1 them.

2 I don't -- you know, what -- sure, I hope we
3 constantly reconsider these standards and make them better,
4 but let's not do it by -- by confusing the format here.
5 Let's just put them in by increasing the budgets by what-
6 ever we assume the duct losses to be, and really simplify
7 this thing.

8 CHAIRMAN SCHWEICKART: Charles, I'd like to under-
9 stand your -- your appeal for simplification by putting
10 these in the tables themselves, rather than in footnotes.
11 It seems to me, either way, there has to be a footnote
12 which says either you add something or you subtract some-
13 thing. I mean one -- there's a certain symmetry here if
14 we're going to account for duct losses, and there are
15 people who are going to have internal ducts versus external
16 ducts.

17 The standards have to clearly call out which
18 budget you use, and it seems to me one has a choice of
19 either having a low set of numbers to which you add, or a
20 high set of numbers from which you subtract. It doesn't
21 appear to me to be intuitive at all that it's simplified by
22 shifting the numbers up into the table, rather than includ-
23 ing them in the footnote.

24 And I -- I'd like to understand better why you
25 believe that that's a simplification, in terms of the

1 usability of the table.

2 MR. ELEY: First of all, the -- the buildings
3 that were used as a basis for setting the budgets have
4 ducts.

5 CHAIRMAN SCHWEICKART: Internal or external?

6 MR. ELEY: Well, they were external, I think,
7 at least in single-family attached and detached. Those
8 ducts were located in the attic space.

9 CHAIRMAN SCHWEICKART: Um-hum.

10 MR. ELEY: So that -- so those base-case build-
11 ings that are the basis of these budget numbers have ducts.
12 If they didn't have ducts, then there would be no duct
13 losses and you could not justify your electric resistance
14 packages.

15 So they have ducts, and we have determined through
16 a kind of concensus process that those duct losses are 15
17 percent, so, therefore, you know, if -- this thing says
18 annual space conditioning budgets, you know, heating,
19 cooling. Well, duct losses are part of the energy required
20 to heat and cool a building, so why should they not be
21 included?

22 CHAIRMAN SCHWEICKART: Well, I guess I don't
23 understand if they're not, Charles, I -- pardon me, but I
24 may be a little dense here. What I see as Footnote --
25 let's take Footnote 2 on a single-family.

1 MR. ELEY: Okay.

2 CHAIRMAN SCHWEICKART: It seems to me that what
3 I see at the top there in the table is the budget that I
4 would have and have to build to if I did have ducts in
5 unconditioned space.

6 MR. ELEY: Provided you have no ducts in your
7 calculation. All I'm saying is, instead of -- instead of
8 monkeying around with the budgets, instead of considering
9 duct losses by monkeying around with the budgets, consider
10 duct losses where they ought to be considered, and that is
11 in the calculation process.

12 We don't -- I mean, to give you an analogy here,
13 you know, all these single-family houses are based on 16
14 percent glass. Well, we could have a footnote down here
15 at the bottom that says, well, if you have -- if you have
16 20 percent glass, then lower your budget by X-amount, and
17 then not allow you to consider the amount of glass in the
18 calculation process.

19 To my way of thinking, that's an exact analogy
20 to what we're doing, is we're taking -- we're taking a
21 parameter that impacts energy use in buildings, and we're
22 dealing with it by making an adjustment to the budget,
23 rather than dealing with it in the logical place, which is
24 in the process of calculating energy use to show compliance
25 with that budget.

1 MR. GAUGER: I think what we -- what I see that
2 Charles is proposing is that we raise the budget number
3 by 15 percent -- let me back off.

4 Currently, if you did a heat load calculation,
5 you would come out of the computer with a number. That
6 number would not include heat losses.

7 MR. STEEL: Duct losses.

8 MR. GAUGER: The duct losses. I'm sorry. You
9 would compare that number against the number in the table,
10 and you would say, "I comply."

11 Now, the option that's being proposed is that we
12 increase these numbers by 15 percent.

13 CHAIRMAN SCHWEICKART: And include duct losses
14 in the calculation.

15 MR. GAUGER: And then when the number comes out
16 of the calculator, we boost that number by 15 percent to
17 see if it checks.

18 CHAIRMAN SCHWEICKART: Well, why is it that the
19 calculator -- the calculation method doesn't include duct
20 losses?

21 MR. ELEY: Well, it could very easily. Right now
22 if you have a -- if you have a hot-air furnace that meets
23 the minimum requirements of the appliance standards, that
24 means it has a 71 percent efficiency. Now, that efficiency
25 does not include duct losses.

1 If you -- if you considered duct losses, and
2 you considered, therefore, the efficiency, not just of the
3 equipment but of the whole system, then it would be 85 per-
4 cent of 71 percent, and it would be that value that you put
5 into the computer program, and out would come a consistent
6 number. It's as simple as that.

7 COMMISSIONER GANDARA: That's where the other
8 issue lies, whether what you have -- what you want to have
9 in your budget is your source energy, and then you subtract
10 the duct losses that go into the envelope, but whether you
11 have your envelope energy, which is the budget that you've
12 set and we've set, and you increase that, you know, to
13 allow for the duct losses.

14 Now, the problem with that is that 15 percent
15 less of X, which would be the source energy, is not the
16 same as 1.15 times Y, which is the budget, so you're still
17 going to have some element of error there, but -- but I
18 think it gets down to another -- another issue, which again
19 -- you know, the Commission has to consider what it is that
20 it's asking the Committee and the staff to do in September
21 or October when this hearing order was published. You
22 know, it -- it wanted kind of minimal changes, and the
23 Committee met and made a policy decision that, whatever it
24 did, it did not wish to have presented to the Public
25 Adviser participants, or whatever, drastic changes, including

1 what would appear to be on the surface total changes --
2 totally new numbers to the budgets, and in particular made
3 a policy decision it didn't want those entries.

4 Okay? So how do you deal within the constraints
5 of that particular policy decision, so that it is not a
6 perceptual problem that the Commission has in fact, you
7 know, changed these budgets again in some way, in addition
8 to dealing, in the best way you can, with the electric
9 resistance package issue, which had been trailing over for
10 a year and a half. Okay?

11 So if you take like the various considerations
12 that people have suggested today here, one is that we
13 wouldn't have -- first of all, one, we wouldn't have budgets
14 for single-family dwellings and lodging houses, or -- what
15 we would have would be a graph that would give you the
16 budget according to the square footage of your home.

17 Now, first of all, that's a tremendous problem
18 to work out between, you know -- with the time given to the
19 Committee. Then, secondly, then what you want is some
20 technical accuracy on the issue of the duct losses, at the
21 same time that you also have developed electric resistance
22 packages that are acceptable to the parties of interest.
23 At the same time, you also want to have a thermal mass --
24 light thermal mass requirements added to the packages, and
25 I think, you know, that as we take these items one by one,

1 what is being lost in this process is that there is a
2 tremendous amount that is being asked of, and, so, there-
3 fore, what is the tradeoff, essentially getting back to the
4 Isenberg principle. The closer you look at it, the more
5 error there is about what you're trying to define, but
6 again, on the other hand, if you look at the composite, are
7 you getting generally where you want to be within a -- with
8 a rational basis for that, within some reasonable element
9 of accuracy.

10 And that is being done, and I think that is a
11 larger issue that should not be forgotten in the process.

12 CHAIRMAN SCHWEICKART: All right. I'd like to
13 try and examine a path for closure on this issue. I think
14 we've -- we have here something of a can of worms which
15 we're trying to simplify by making relatively minimal
16 changes, which nevertheless account for a number of desires,
17 and though I may be persuaded that Mr. Eley has in some
18 sense a technical issue here in terms of implications and,
19 let me say, dressing things up, it seems to me that the
20 fundamentals we're dealing with are to, in these changes,
21 include the issue of duct losses for consistency as we
22 move into the next step in providing for packages for
23 radiant and electric resistance heating, and to maintain
24 a balance there, which is -- which is necessary, while at
25 the same time not appearing to have totally turned over the

1 standard by changing the basic numbers in the table but,
2 rather, to do that through the inclusion of a footnote
3 which would provide the building industry any mechanism
4 for accounting for duct losses.

5 Separate from that, then there is the question of
6 whether or not there is a real difference between multi-
7 family attached and detached, that is, do we need two foot-
8 notes or three footnotes, and that sort of thing. But it
9 would -- it would seem that the first portion of the state-
10 ment that I made is the intention of what I take it to be
11 most of the parties in the proceeding, as well as the
12 Committee, and what we're dealing with here is a certain
13 inelegance that's necessitated in attempting to accomplish
14 that, that's being raised by the elegant Mr. Eley.

15 Now, I -- no slur in any way attached to that.
16 It's often appreciated, though perhaps not always.

17 MR. ELEY: No, I've used that word "elegance"
18 in your earlier hearings to describe this problem.

19 CHAIRMAN SCHWEICKART: But if that is a legitimate
20 characterization of it, that this -- this may be somewhat
21 inelegant, but nevertheless effective in achieving the
22 purposes of the parties and the Committee, then I guess I
23 am prepared to move forward with a slightly inelegant but
24 effective solution to meet the maximum number of needs
25 here.

1 Mr. Eley, is there a different -- forgetting
2 for a moment the issue of two footnotes versus three, is
3 there a difference in what I -- how I've characterized
4 this and the way in which you're presenting it? I don't
5 mean to mischaracterize it, but --

6 MR. ELEY: Well, I think there's -- substan-
7 tively, there's absolutely no difference between having
8 these footnotes and raising the budgets.

9 CHAIRMAN SCHWEICKART: Yes.

10 MR. ELEY: Now, we may all think that we're pull-
11 ing the wool over somebody's eyes, you know, by not just
12 going in and changing the budgets, but we're really not.
13 There's absolutely no substantive difference between these
14 footnotes and going in and changing the budget.

15 CHAIRMAN SCHWEICKART: The houses will be built
16 the same way.

17 MR. ELEY: Absolutely.

18 CHAIRMAN SCHWEICKART: I mean nothing will change.

19 MR. ELEY: Nothing will change.

20 CHAIRMAN SCHWEICKART: Right.

21 MR. ELEY: The only difference in my opinion is
22 an element of confusion.

23 CHAIRMAN SCHWEICKART: Well, it's not --

24 MR. ELEY: What you're proposing here is -- is
25 more confusing, but --

1 CHAIRMAN SCHWEICKART: I think the point that has
2 not been made well to me is whether it is more or less con-
3 fusing one way or the other. It seems to me when one ought
4 to bite the bullet and incorporate duct losses into this
5 process, that that is admittedly an additional confusing
6 element.

7 MR. ELEY: Um-hum. Well --

8 CHAIRMAN SCHWEICKART: And the only question is
9 is one way clearly more simple than the other, and it does
10 not appear to me as though it is, particularly.

11 MR. GAUGER: I think a larger number of people
12 would have to do a duct loss calculation if you put the
13 budget into it. You know, I don't know the number, if 80
14 percent of the people have ducts and 20 don't, so you're
15 asking 80 percent of the people to now account for duct
16 losses, which we've all admitted I think at this table are
17 very imprecise, and 20 percent of the people then would not
18 have to do the loss, and --

19 COMMISSIONER COMMONS: I concur with that.

20 CHAIRMAN SCHWEICKART: Well, I want to make sure
21 I understand. What you're suggesting is that Mr. Eley's
22 recommendation adds to the burden or reduces the burden?

23 MR. GAUGER: It increases the burden, so that 80
24 percent of the people have to consider ducts rather than
25 the 20 percent.

1 CHAIRMAN SCHWEICKART: Okay.

2 MR. HUSTON: Actually, it's a hundred percent.
3 A hundred percent would have to consider duct losses, as
4 opposed to only the 20 percent in this example.

5 CHAIRMAN SCHWEICKART: All right.

6 MR. ELEY: Well, that's like saying that -- you
7 know, that's like putting windows in the footnote and say-
8 ing, well, you know, since windows are in your footnote you
9 don't have to consider them in your calculation. It's non-
10 sense, because everybody has got to consider ducts one way
11 or the other.

12 They either consider them in making an adjustment
13 to the budget or in not making an adjustment to their
14 budget, or they consider them -- you know, it -- it abso-
15 lutely makes no sense to me.

16 But the other important issues are the formulas
17 themselves. Now, by adopting these footnotes, you are tak-
18 ing a precedent here that you've not done before, and that
19 is that you're endorsing algorithms for making certain
20 types of calculations.

21 COMMISSIONER GANDARA: Let me -- let me explain
22 the Committee's position on this thing, because Mr. Eley
23 mentioned earlier, why don't you just include the, you know,
24 15-10, or five or 15, ten, ten, or whatever it was that
25 you wanted on it, and then --

1 MR. ELEY: 15-15-10.

2 COMMISSIONER GANDARA: -- and then provide the
3 formula or calculation method in the conservation manual.
4 The Committee was concerned that, with respect to an issue
5 that would change the budget, that that would later be con-
6 sidered a standard, and something that changes the budget
7 ought to be in the regulation.

8 Okay. So that -- and your conservation manual
9 is not extended.

10 MR. ELEY: Well, your algorithms for calculating
11 window losses also affect the budget. They're not here.

12 COMMISSIONER EDSON: I just have one comment.
13 I think we're a lot closer now than we were a month or so
14 ago, as I recall the earlier hearing where these issues were
15 raised.

16 CHAIRMAN SCHWEICKART: All right. I guess the
17 final thing that I want to make sure I understand, and if
18 you will, Mr. Eley, accept as a given for the moment foot-
19 notes formulas, and then I want to understand which foot-
20 note do you want deleted.

21 MR. ELEY: I would -- assuming that I've lost that
22 battle, and we will have footnotes, then I would -- then I
23 would delete -- well, you can't just delete one. You've
24 got to change them all, but basically Footnote 2 could
25 apply to both attached and detached, then, and it would be

1 15 percent.

2 Footnote 2 would then apply to multi-family, and
3 it would be ten percent, and the five percent footnote
4 would be deleted.

5 Now, then, if you're going to endorse a method
6 for calculating duct losses, which you're really doing
7 here by including these footnotes, it needs to be more
8 complete. You need to include the percentage of ducts
9 located within unconditioned space as one of the parameters
10 here, so it should read, "The heating budgets may be
11 increased by 15 percent, times RD, minus 2.1, divided by
12 RD, plus 1.3, times the percentage of ducts located within
13 unconditioned space."

14 COMMISSIONER COMMONS: Maybe you have an answer
15 to just having one footnote, because then you could start
16 with your 15 percent, if you put all the ducts in here,
17 because their argument was that two-thirds in an apartment
18 house are not, and one-third in the detached, and if you
19 just used that and added that to your formula, it would
20 apply to all units.

21 That was the only difference between staff's posi-
22 tion and your position, is the percentage of ducts that
23 are either in that space or not.

24 MR. ELEY: But the issue is, as I -- if I take
25 a deliberate action in the design of the building to locate

1 ducts within the conditioned space as an energy conserva-
2 tion feature.

3 COMMISSIONER GANDARA: You'll use a -- you'll use
4 the computer approach, and you'll have no problem.

5 MR. ELEY: Well, no, I can't do that because, see,
6 you're -- I would love to do that. That's what I'm asking
7 to have the option to do, but I can't, because you -- you've
8 taken that out of my purview here. You're saying the only
9 way you can deal with duct losses is by this formula, and
10 you do it by increasing your budget, and you ignore duct
11 losses in your computer count. That's what you're telling
12 me.

13 MR. GAUGER: He's correct. The way it's written
14 now, we do not allow for innovative duct design.

15 MR. ELEY: Right.

16 COMMISSIONER GANDARA: Well, again --

17 MR. GAUGER: And maybe the suggestion that the
18 percentage in -- you know, is a step in that direction.
19 I'm not sure.

20 COMMISSIONER GANDARA: Yeah. Well, I would say
21 leave it -- the problem that's presented here is, for
22 example, the architectural design you have in your offices,
23 where you have duct losses -- ducts are exposed to condi-
24 tioned space. Okay?

25 In that kind of situation, if you have a sliding

1 scale of so much percentage exposed ducts or not, you know,
2 again it -- you know, architecturally, I think it does give
3 you the flexibility from a design point of view, but from
4 the point of view of estimating what that might be here,
5 I don't -- you know, I don't claim to begin to think there
6 would be a complication in that. That's really five hours
7 late, I might add, but -- so, you know.

8 Again, I -- you know, Mr. Eley is very innovative
9 and creative, and I think an appropriate petition to
10 change the standards here would be considered within the
11 realm, but at the present moment in time, I -- I don't see
12 a necessity to change this to deal with this as a -- a
13 change -- to deal with the change as a precondition to
14 proceeding with the rest of the elements, including the
15 electric resistance package.

16 CHAIRMAN SCHWEICKART: Commissioner Commons.

17 COMMISSIONER COMMONS: Yes. Mr. Gauger, if we
18 were to add that to the algorithm, the percentage of ducts,
19 could we have just one footnote?

20 MR. GAUGER: I don't know. We might want to ask
21 Mr. Steel to comment on that, since he's been primarily
22 involved. I don't know the impact of doing that.

23 COMMISSIONER COMMONS: Mr. Steel, there was a
24 suggestion that we use in the algorithm the percentage of
25 the ducts, and the question is if we did that could we just

1 have one footnote, and that would take into account the
2 difference between the three areas that we're covering?

3 MR. STEEL: The answer is yes. Assuming you like
4 Charles Eley's approach of 15 percent, 15 percent, and half
5 of 15 percent, because -- see, the -- the reason -- if you
6 have apartments, that's the third kind. The assumption is
7 that there's a unit below that has all of its ducts in con-
8 ditioned space and a unit above with all of its ducts in the
9 attic, so that means half of the ducts are in the attic.
10 Half of the ducts in the building are in the attic. The
11 other half of the ducts in the building are in conditioned
12 space between the first and second floors.

13 COMMISSIONER COMMONS: It sounds to me like the
14 difference sometimes is not between if it's multi-family
15 or single-family or attached. It's in the construction,
16 and this would get down to the real world in terms of what
17 someone does in designing the house, and allows the greatest
18 flexibility, and encourages the most energy savings, and
19 it's also the simplest.

20 MR. STEEL: It -- appreciating what Commissioner
21 Gandara said about -- and Commissioner Edson said, this is
22 a step in the right direction. That's where I sort of con-
23 cluded, too, that what we're proposing now is a step in the
24 right direction.

25 It's not simple, because most designers don't

1 think about where they're putting their ducts today. They
2 don't even -- you know, they don't even draw ducts on a --
3 the air conditioning contractor draws the ducts. The
4 designer doesn't draw them, and although, you know, that's
5 coming, a few designers who are out there, I'd say three
6 percent who might draw a duct design, I think we're really
7 talking about something for future work more than for pre-
8 sent work.

9 And I might --

10 COMMISSIONER COMMONS: I was sure that if it
11 weren't for the apartments at five percent, where I think
12 the difference could be as much as five to 15 percent with
13 careful work, and that's the one that's really far off.

14 MR. STEEL: Well, half is -- is a good answer,
15 half of 15. If you believe 15 percent single-family and
16 attached, half of that is what should be apartments, because
17 the assumption for apartments is that half the ducts are
18 in unconditioned space, half in conditioned space.

19 CHAIRMAN SCHWEICKART: Let me -- let me ask the
20 Committee to -- what we're -- what we're looking at here,
21 if I understand the response of Mr. Steel and the sugges-
22 tion of Mr. Eley, we could end up here with a single
23 formula, with a single footnote, in fact, which gives a
24 percentage credit for duct space in residential dwellings,
25 dependent upon the percentage of duct -- that total linear

1 ducting which is in conditioned versus unconditioned space.

2 It would seem to me then the question is simply
3 one of, is 15 percent the correct or the best consensus
4 number where the assumption is a single-family dwelling
5 with a maximum of duct exposed to unconditioned space. I
6 take it that in the record the 15 percent seems to be a
7 general consensus.

8 COMMISSIONER COMMONS: We've heard no testimony
9 to the contrary.

10 COMMISSIONER GANDARA: That's right, 15.

11 MR. ELEY: I would like to --

12 COMMISSIONER GANDARA: And although I -- let me
13 add one added complication, which, you know, will be --

14 CHAIRMAN SCHWEICKART: Goodie.

15 COMMISSIONER GANDARA: -- how are we going to
16 enforce a percentage of -- of, say, ducts in conditioned
17 space, you know, as has been indicated? That's not some-
18 thing that's very well thought of now. Frankly, I'm -- I'm
19 at the point that I think that, to a substantial degree, I
20 -- I don't have a feeling that half of 15 percent is any
21 more accurate than five percent or --

22 CHAIRMAN SCHWEICKART: Well, what I'm proposing,
23 Commissioner --

24 COMMISSIONER GANDARA: But my feeling is based
25 on what the staff has developed over time, and the

1 opportunity provided to other people to provide some basis
2 for that seven percent be admitted, or five percent, but
3 given that marginal difference, in fact I -- you know, I
4 would place weight on the staff's judgment, such as it is
5 contested by other parties, you know, that we not begin
6 into this -- get into the situation of, well, you know,
7 we'll toss a coin, and if seven percent is better, then
8 we'll only have two instead of three, and so forth.

9 I think -- I really think that -- that that's a
10 bit late, it's a bit late for that right now, but in any
11 case, let's -- let's proceed with hearing some recommenda-
12 tions, but my position is, at this point in time, that this
13 is the best that could be done, under the circumstances
14 the best that can be done.

15 I have continually been amazed by the fact of new
16 understandings cropping up the more this issue is discussed,
17 and I think I appreciate better Mr. Eley's concern about
18 the percentage issue in conditioned versus unconditioned
19 space.

20 I would say, however, that his suggestion was
21 also that the formula belongs in the calculation method.
22 Then, certainly, rather than deal with it here, now, in
23 amending these things, that he propose a calculation
24 method that can certainly be certified, at least right now,
25 by the Executive Director for these -- for these duct

1 losses.

2 MR. ELEY: If you adopt this, you've done that,
3 except you've done it in the standards instead of where it
4 should be.

5 COMMISSIONER GANDARA: No. We will -- we will
6 have done it, you know, for the packages. Okay.

7 MR. ELEY: These are not the packages. These are
8 the -- these are the budgets.

9 COMMISSIONER GANDARA: The budgets for -- you
10 know, for the packages, as well as those that you don't
11 have to deal with, but I'm saying that -- that you can
12 petition, you can submit a calculation method that would
13 vary from this, but at this point in time we're not going
14 to devise a calculation method in the next ten or 15
15 minutes.

16 MR. ELEY: I have a question, then. What you're
17 suggesting is that I -- I mean if I came up with an alter-
18 nate way of dealing with duct losses, wouldn't I have to
19 come and petition you to change the regulations themselves?
20 Because they are in the regulations. As opposed to going
21 through the other -- through the normal process of -- of
22 identifying a faulty algorithm in the CALPAS program, or
23 something.

24 COMMISSIONER COMMONS: Well, today was supposed
25 to be your day to have an opportunity to present a position

1 which we would consider, rather than telling you to come
2 back another year.

3 COMMISSIONER GANDARA: Well, but Mr. Eley has
4 also had two other hearings.

5 MR. ELEY: Well, I've been saying this all three
6 times. I thought I'd give it a final crack.

7 COMMISSIONER GANDARA: But you have not proposed
8 a calculation method, and you have not proposed any num-
9 bers, and you have not proposed to change the budgets.
10 You have said what you don't like.

11 MR. ELEY: You don't have to adopt a calculation
12 procedure. You haven't adopted a calculation procedure
13 for any of the other aspects of estimating energy use in
14 buildings.

15 COMMISSIONER GANDARA: Okay.

16 MR. ELEY: Why do it to us?

17 COMMISSIONER GANDARA: Well, then, I would sug-
18 gest to the Commission let's not adopt it, and let's not --
19 you know, it puts us in the position we also don't deal
20 with electric resistance, and let's go back and make the
21 conforming amendments.

22 CHAIRMAN SCHWEICKART: Or alternatively --

23 COMMISSIONER GANDARA: That says that we're back
24 where we were.

25 CHAIRMAN SCHWEICKART: Or alternatively, to

1 consider at the same time as the electric resistance
2 packages a -- a modification to the calculation method in
3 the compliance manual which would account for duct losses,
4 which then, coming in together with the electric resistance
5 packages, which are also in the compliance package -- in
6 the compliance manual; then, again, maintain the consis-
7 tency between those two that we're looking for. I guess
8 that would then say that we could drop out this entire
9 step here that we've been debating so long and still main-
10 tain the desire of both the Committee and the various
11 parties involved, and not do it in the standards themselves
12 but, rather, in the compliance package.

13 MR. STEEL: It would be nice if you could do that,
14 but in fact you can't, because of the interconnections of
15 things. You have to take a position, in my opinion, you
16 have to take a position today of either putting footnotes
17 down there or putting the additional 15 percent into the
18 budgets themselves.

19 You have to today in the standards allow for
20 duct losses to enter. They either enter in footnotes or
21 they enter up in the budgets. If you don't take that
22 action today, then there is no -- when you try to calculate
23 the electric resistance packages, there is nothing -- there
24 is no way to deal with duct losses. You know, you need to
25 give a way to deal with duct losses, one or the other,

1 today.

2 MR. GAUGER: There are two things covered in that
3 footnote, and I think we're mixing them up. One is the 15
4 percent, which may or may not be a precise number for duct
5 losses under normal conditions. The formula is a correction
6 factor for giving additional insulation to those ducts,
7 and they are entirely different questions.

8 That says normally you're required to have an inch
9 of duct wrap on this, and if you go to two inches you get
10 additional credit, which would in effect change the 15 per-
11 cent.

12 CHAIRMAN SCHWEICKART: Well, but then there is
13 a third issue, which is --

14 MR. GAUGER: But the formula doesn't give you the
15 15 percent.

16 CHAIRMAN SCHWEICKART: -- which is if a designer
17 -- that is the incentive for a designer to incorporate
18 within the conditioned space a greater percentage of the
19 ductwork.

20 MR. STEEL: Okay. That condition is not being
21 dealt with in this proposal, and I question whether we
22 want to deal with it in this series of hearings. It is an
23 energy-saving mechanism, but there are others, too, and
24 this was one that, you know -- it's perhaps not well enough
25 formulated to consider in an adoption hearing today that

1 mechanism of moving ducts -- I mean because, like, for
2 instance, we're considering putting -- calling a percentage
3 -- what percentage of the ducts are in conditioned space.
4 How do you calculate that?

5 By the length of the ducts? By the surface area
6 of the ducts? Do you size -- you usually don't size your
7 ducts when you're doing a house design. That happens by
8 the air conditioning person when he comes in and sees where
9 he can stick his ducts, and it's a -- it's a nice idea,
10 but it's one that we really have to think about for a sub-
11 stantial time to come up with a methodology that's appro-
12 priate.

13 So there are two approaches. If you want to think
14 about that, then you pretty well have to put your extra
15 energy directly into the budgets. When you do that, you
16 don't define how you're going to solve the duct insulation
17 problem. You'll put that into the calculation technique
18 in a couple of months when you approve the compliance
19 manual.

20 But -- do you follow that one? I mean that solu-
21 tion allows you time to figure out how you're going to deal
22 with duct -- ducts in conditioned space or unconditioned
23 space, and duct insulation. You put your -- you put the
24 extra 15 percent, if you will, directly into the budget
25 numbers. Then two months from now you can come up with a

1 calculation technique that matches that and gives credit
2 to putting ducts wherever you put them.

3 If you don't do that, which Commissioner Gandara
4 has suggested not to at this time, so that you don't change
5 the budget numbers in front of the Building Standards
6 Commission in the next six months, which I concur with, then
7 -- then you have to handle these things as best you can in
8 footnotes.

9 And my feeling is that the key mechanism that
10 people are really going to use is extra duct insulation,
11 because that's just a note on the plans. Put two inches
12 of duct wrap on instead of one.

13 And the way that it works is, when you put one
14 inch on, that's the standard. There's no change to the
15 budgets. That's what everybody is using today is one inch,
16 so there would be no change to the budgets and people
17 wouldn't have to deal with this.

18 However, if you double the effective insulation,
19 and if 15 percent was the total for duct losses, you'd get
20 seven and a half percent. Double the insulation, you half
21 the heat loss, you're going to get seven and a half percent.

22 CHAIRMAN SCHWEICKART: Well, there's no reason,
23 it would seem to me, Mr. Steel, that that can't also be
24 handled in the compliance manual two months from now and
25 wipe out all this.

1 MR. STEEL: Well, you have to put -- you have to
2 put the duct losses into the budgets in order to handle
3 them in the compliance manual in two months from now. You
4 would have to put the 15 percent into the budgets today so
5 that you'd have something to work with two months from now
6 in the compliance manual.

7 COMMISSIONER EDSON: Yes.

8 MR. STEEL: The 15 percent --

9 COMMISSIONER EDSON: But do you need the formulas?

10 MR. STEEL: No. You don't need any footnotes at
11 all if you choose to put the 15 percent into the budgets,
12 because the --

13 CHAIRMAN SCHWEICKART: Aside -- aside from the
14 psychological issue dealing with the Building Standards
15 Commission of trying to explain that we really didn't
16 change the budgets, even though the numbers changed --

17 MR. STEEL: Yes. Aside from --

18 CHAIRMAN SCHWEICKART: -- which is admittedly a
19 difficult psychological trick.

20 MR. STEEL: Yes.

21 COMMISSIONER GANDARA: Try the Legislature.

22 CHAIRMAN SCHWEICKART: Well, but I take it --

23 MR. STEEL: Yeah. The Legislature. You're right.

24 CHAIRMAN SCHWEICKART: I take it here that we
25 have CBIA support for this, or would have CBIA support for

1 this. Is that correct?

2 MR. RUBY: I -- we stand mute on this...

3 (Laughter.)

4 CHAIRMAN SCHWEICKART: Today, or forever, or
5 what --

6 MR. RUBY: Darned near forever, but it's been
7 an interesting discussion.

8 (Laughter.)

9 MR. RUBY: We'd like to give SMACNA and some
10 other --

11 MR. VERMEULEN: SMACNA has been trying to raise
12 its hand for half an hour.

13 CHAIRMAN SCHWEICKART: Mr. Eley, I take it that
14 your recommendation would be, and support in front of the
15 Building Standards Commission, that in fact the standard
16 hasn't changed. The numbers have changed and the way in
17 which it's calculated is changed.

18 MR. STEEL: Because -- because the calculation
19 technique has changed, but the same house is passing.

20 MR. ELEY: The standards are no more stringent
21 or less stringent than before, and I'll help you --

22 CHAIRMAN SCHWEICKART: I -- I fully appreciate
23 that. What I'm trying to decipher here is in fact do we
24 have a real problem with, if you will, doing this more
25 elegantly, if I can use that again.

1 MR. STEEL: It -- it's really only a Building
2 Standards and Legislature issue. The elegance --

3 CHAIRMAN SCHWEICKART: It is not a legislative
4 issue unless somebody raises it to the Legislature. All
5 right?

6 MR. GAUGER: It's more than that. It's much more
7 than that, because there are a lot of people out there who
8 have tried to meet the existing budgets, and it's going to
9 take a lot of explanation to them, and -- and in your
10 dealings with the building departments.

11 If we send out a table of new numbers, then
12 people like Jerry, who have done a thousand buildings, are
13 going to have to explain why his number is different than
14 this number.

15 MR. STEEL: And that will upset implementation
16 a little bit --

17 MR. GAUGER: It is --

18 MR. STEEL: -- during the (unintelligible, all
19 talking at once) time.

20 MR. GAUGER: It is an implementation problem,
21 unfortunately.

22 COMMISSIONER COMMONS: We will have to have a
23 footnote, still, that this doesn't account for duct loss.

24 MR. STEEL: It does account for duct losses. No,
25 you don't need the footnote, because it says -- because

1 the -- you know, it's the annual energy consumption, accord-
2 ing to the calculation technique, is what's in the table,
3 so when you go to the calculation technique you'll say,
4 "and add duct losses," you know, to compare -- compare the
5 numbers.

6 COMMISSIONER COMMONS: We could actually argue
7 that that is not a substantive change. It's a procedural
8 change.

9 MR. ELEY: I would recommend that you put the
10 footnote in that these budgets include duct losses of X-
11 percent, X-percent and X-percent.

12 CHAIRMAN SCHWEICKART: And the calculations made
13 with the former table are still valid.

14 MR. ELEY: Right. Absolutely.

15 MR. STEEL: For duct loss. That's okay. That
16 would be nice for the Legislature.

17 MR. ELEY: That clarifies it for you. I mean if
18 we were adopting these things from the beginning, I don't
19 think that that would be necessary, but since we're making
20 this change I would recommend that it be in there.

21 COMMISSIONER COMMONS: But it would be a procedural,
22 not a substantive change.

23 MR. ELEY: Yes, absolutely.

24 COMMISSIONER COMMONS: Because we haven't changed
25 anything.

1 MR. ELEY: Absolutely.

2 MR. STEEL: Well, there is a -- there is a sub-
3 stantive change in the concept that you're talking a ten
4 percent for multi-family, instead of a 15 percent, and --
5 I mean a 15 --

6 COMMISSIONER COMMONS: That would depend on --

7 MR. STEEL: -- I mean those number differences,
8 if you use them.

9 COMMISSIONER COMMONS: Well, no, because we are
10 not accepting any of the footnotes. We're deleting them.
11 We can delete anything we wish today.

12 MR. STEEL: Sure.

13 COMMISSIONER COMMONS: So we, one, delete the
14 footnotes. That's not substantive, because we're allowed
15 to delete today.

16 MR. STEEL: Correct.

17 COMMISSIONER COMMONS: And then if we procedurally
18 up the budgets by 15 percent and add the footnote, that's
19 a procedural change, and we haven't changed anything.

20 MR. STEEL: Well, it would be procedural for
21 single-family, but your proposal here is ten percent and
22 five percent for multi-family and apartments.

23 COMMISSIONER COMMONS: But that is something we
24 haven't adopted. That was just a proposal, so it's --

25 MR. STEEL: I know, but that's the only thing

1 you can consider today substantively.

2 COMMISSIONER COMMONS: Well, we can substantively
3 vote to delete that.

4 MR. STEEL: Yes. But you can't consider some-
5 thing different than that today.

6 COMMISSIONER COMMONS: Well, now we're with the
7 table. Then we can procedurally do the other.

8 I'll ask legal counsel.

9 MR. STEEL: I'd like to submit for the record,
10 if I can -- this is a -- something I did on 1-19-83, which
11 actually calculates for all three kinds of dwellings the
12 actual numbers for each zone for the heating budget, the
13 cooling budget and the total budget, that you should
14 increase the budgets, instead of using the 15 percent, ten
15 and five. This is actually a zone-by-zone calculation that
16 I have done, which is fairly detailed, and it actually
17 calculates the average -- weighted average attic tempera-
18 ture during the cooling -- when cooling is being done and
19 when heating is being done, and considers all of the things
20 that need to be considered.

21 I'd like the record to show that there is work on
22 -- and the numbers say -- they, of course, vary by zone.
23 Typical numbers are like 18, 19 percent for heating in
24 single-family and multi-family, 11, 12 percent for cooling
25 in single-family and multi-family, and apartments like ten

1 percent for heating, and maybe six percent for cooling.

2 CHAIRMAN SCHWEICKART: Commissioner Gandara, I
3 would like to understand from the -- the thinking of the
4 Committee in terms of the, shall I say the reluctance to
5 deal with this in the methodology, by the methodology we
6 have been basically talking about here toward the end;
7 that is, changing the budget numbers; then accounting in
8 the calculation methods and in the manual, in the compliance
9 manual, with the calculation of duct loss, and understand
10 whether there are considerations aside from the, if you
11 will, the psychological one, which I think can be mitigated
12 to some extent by a note which would state that the budgets
13 in fact have not changed.

14 The calculations done by builders using the
15 previous addition to the table are entirely valid.

16 Is there other -- are there other considerations
17 which would argue against that option which we have not
18 considered?

19 COMMISSIONER GANDARA: Yes. There are lots of
20 them. The staff has already stated them. I've stated them
21 before. I don't know how many times I have to go through
22 them.

23 One, clearly there are going to have to be more
24 people that are going to have to do the calculation than if
25 you do it the way you do it here.

1 Secondly, it's just a question of timing, and the
2 question of resources that the Commission is willing to
3 devote to this.

4 And, thirdly, I think there's the issue of what
5 are you going to do now when you sort of change the elec-
6 tric resistance packages so that it will be before you two
7 weeks from today, and again, you know, the situation is
8 you can't be all things to all people. This is a step in
9 the right direction.

10 I don't think it's that unreasonable, and frankly,
11 you know, it seems to me that we're doing no better by
12 providing sort of part solutions to these issues and to
13 issues that are considered by the Committee. It seems to me
14 that if there's -- there's a desire to do that, then we
15 should probably be dealing with all these changes at full
16 Commission hearings so that we don't waste a lot of time
17 in getting to these issues. We could have had these dis-
18 cussion before.

19 I mean they've been before the Committee. The
20 Committee has given you the best recommendation possible,
21 while the Commission has a right to change those. I think
22 that we're not buying that much more for the additional
23 problems that we're buying here, and so that -- that's my
24 basic problem here.

25 COMMISSIONER EDSON: I'd like to concur with

1 Commissioner Gandara's description of the problems in this
2 area, and I'd -- and I'd simply reiterate what I said
3 earlier, and that is that we have made considerable progress
4 towards arriving at a much improved basis for incorporating
5 duct losses in the residential building standards, and I am
6 certainly not of the belief that we won't find better ways
7 to do it in the future, and I invite people to come in and
8 show us the better way so that we can do it, but to try to
9 make that kind of adjustment now after what has been a
10 rather lengthy process in the Committee hearings I think
11 is extremely difficult.

12 COMMISSIONER COMMONS: Are you saying you support,
13 then, retaining the five percent in apartments where we
14 heard almost no testimony in support of it?

15 COMMISSIONER EDSON: I think there are other
16 people here to speak. Perhaps --

17 MR. HANNAH: Yes. There are other people here,
18 too, who would like to speak to that issue.

19 If we're going to get into an issue of what is
20 the degree of duct loss -- my name is George Hannah,
21 Southern California Gas Company.

22 We have participated in two Committee hearings
23 on this issue. We spent considerable effort researching
24 the amount of duct loss, trying to find statistics that may
25 or may not support the staff, and we are unable to verify

1 a set of duct loss numbers that were of any particular
2 difference than the staff.

3 Now, I didn't come up here today expecting that
4 the duct loss was going to be an issue before the full
5 Commission, because of what went on in the previous
6 Committees. I agree fully with Commissioner Gandara. The
7 Committee has exercised two Committee hearings, and now
8 we're getting into a very detailed discussion of what is a
9 proper percentage of duct loss, and I -- I'm not prepared
10 to address it.

11 I'd like to take this issue back, if it's going
12 to be an issue, have it reviewed, and we'll try again, if
13 necessary, but we can't -- I can't possibly comment on this
14 today.

15 COMMISSIONER COMMONS: All right. What you're
16 saying, that you have no basis for saying that a house
17 should be 15 percent and an apartment house five. You're
18 willing to see that the issue goes back to the Committee
19 for further study, which would be in accord with Mr. Eley's
20 recommendation of an increase in the budget, but not a
21 recommendation of an increase of -- adopting today a 15,
22 ten and five. Is that correct?

23 MR. HANNAH: No, not 3xactly, Commissioner. What
24 I'm saying here is that the staff has presented 15, ten and
25 five. We've had two Committee hearings in which to take

1 dispute with that. The numbers have held up. There is a
2 reasonable basis, I think, where the five percent duct loss
3 for multi-story dwellings versus the single-family dwell-
4 ing.

5 In other words, there's been no good issues
6 raised, and -- and I did not consider this to be an issue
7 today before the full Commission, so I'm quite in agreement,
8 based on the work we did, that the five, ten and 15 is a
9 reasonable number for this period of time, until somebody
10 is able to come up with a scientific -- or other figures
11 based on some thorough study.

12 CHAIRMAN SCHWEICKART: So, Mr. Hannah, you are
13 basically supporting the Committee recommendation. Is that
14 correct?

15 MR. HANNAH: Yes. I'm supporting the Committee
16 recommendation. I'd be concerned if the numbers start
17 changing at this late date based on no evidence.

18 COMMISSIONER COMMONS: Well, I'm concerned that
19 the numbers are being presented with no real evidence. I
20 have not heard any information other than one statement by
21 Bill Huston as to the numbers, and I think it's the obliga-
22 tion of those who are proposing a regulation to justify the
23 numbers that are being presented, and I have not heard that
24 today anywhere near sufficient to me to justify saying one
25 is 15, one is ten, and one is five.

1 The only information that I have heard today is
2 that there is a fairly substantial study that I have not
3 seen, and I don't know if any of the other Commissioners
4 have seen, that break it down between heating and cooling,
5 and I don't think we have the information today to vote
6 upon the 15, ten and five, and I would like that this
7 Commission not take action on that, and I take the position
8 that was suggested by Commissioner Schweickart.

9 MR. STEEL: If I might, 90 percent -- 95 percent
10 of the houses built in California, housing units built in
11 California, will either use the packages or the point sys-
12 tem. In both cases they will use the 15 percent, because
13 the 15 -- you know, the packages just use minimum insula-
14 tion, and the point system uses the 15 percent for single-
15 family.

16 So these things that we're talking about, the
17 multi-family and the apartments, because of the way the
18 system works will only apply to that portion of the five
19 percent houses that are apartments and multi-family. Maybe
20 that's half of that. So we're talking about an effect on
21 two and a half percent of the houses -- of the dwelling
22 units to be built in California by any changes that we
23 make.

24 So I think -- you know, we're talking a difference
25 between seven percent or eight percent and five percent for

1 apartments. Perhaps that's not enough of a significant
2 issue to get involved at this late date with.

3 CHAIRMAN SCHWEICKART: All right. Mr. Steel,
4 thank you.

5 Mr. Vermeulen, you had some comments?

6 MR. VERMEULEN: Mr. Chairman, my name is Phil
7 Vermeulen. I represent California SMACNA.

8 Obviously, listening to all this discussion
9 today, this is one of the bread-and-butter issues of my
10 contractors, seeing that that's what they do on a daily
11 basis.

12 The only thing I resent here is not having seen
13 these footnotes before today, so I did not have time to
14 discuss this issue with my contractors to be able to come
15 here today and knowledgeably talk about it. That's the
16 only issue I have.

17 I have seen, however, some numbers touted. I
18 wrote back to our national organization, because I know this
19 is a controversial issue, and if anybody has done any
20 studies it would have been national SMACNA, on duct losses.

21 I just got a letter back yesterday that says
22 that there seems to be evidence that there are duct losses
23 in single-family houses may be around eight percent, but
24 they are going to spend a considerable amount of money
25 doing some extensive research on this issue. As soon as

1 I get that information, I definitely will bring that back
2 in front of the full Commission, particularly if the num-
3 bers are lower.

4 But I do raise that question and concern that,
5 having not seen these footnotes before today, that does
6 kind of put me in an awkward situation, and -- that's about
7 all I have to say there.

8 MR. GAUGER: Those particular numbers were quoted
9 in the --

10 MR. VERMEULEN: Not numbers. I said --

11 MR. GAUGER: -- draft amendments.

12 MR. VERMEULEN: Yeah.

13 MR. GAUGER: The ten and the 15, though, are not
14 new numbers today.

15 MR. VERMEULEN: No. That's not an issue. That's
16 not what I'm arguing. I'm saying that they may be a little
17 high. I'm not certain. That is something -- I'll live
18 with those right now.

19 MR. GAUGER: The 15 and the ten percent.

20 MR. VERMEULEN: Right.

21 MR. GAUGER: Okay. You implied that those were
22 new numbers today, and those have been in the footnotes --

23 MR. VERMEULEN: If I said new numbers, I -- that's
24 not what I meant. I meant the footnotes.

25 CHAIRMAN SCHWEICKART: Excuse me. Mr. Vermeulen,

1 what recommendation are you making to the Commission?

2 MR. VERMEULEN: What I'm saying is I can live
3 with these numbers that you've got right for the time being.
4 At a later date --

5 CHAIRMAN SCHWEICKART: Well, we're going to act
6 today --

7 MR. VERMEULEN: I understand.

8 CHAIRMAN SCHWEICKART: -- one way or the other.

9 MR. VERMEULEN: I understand. At a later date,
10 I may try to bring something back, and we'll go through the
11 formal procedure as necessary to correct those, if indeed
12 these numbers are off substantially.

13 CHAIRMAN SCHWEICKART: All right. Is it your
14 recommendation that we proceed by accounting for duct
15 losses in our action today, or do you have any particular
16 comment on that?

17 MR. VERMEULEN: I will go along with the
18 Committee's decisions here right now.

19 CHAIRMAN SCHWEICKART: All right. Fine. Thank
20 you.

21 Well, are there any further questions for
22 Mr. Vermeulen?

23 All right. Mr. Ladine?

24 MR. LADINE: Bob Ladine with RC Systems.

25 Now we seem to have our ducts all lined up in a

1 row, and you know they are progressing somewhat inelegantly
2 towards some direction. There's still reference to the
3 Ugly Duckling that has some basis for the existence of
4 these last points, and as our previous comments alluded
5 to, and you've identified the problem incorporating these
6 points, we might add that the problem is further extended
7 when you now realize that a -- an equipment deficiency has
8 some relationship in systems efficiency and performance, and
9 we can start now adding to these footnotes such other con-
10 ditions that relate to resistance-convection-electric, and
11 some others that are more specifically unique to resistance-
12 radiant-electric and infrared, and one particular is the
13 -- are the infiltration values which affect your loads.

14 When we stop to consider that a pressurized and
15 vacuumized forced-air system is going to have a consider-
16 able effect on your infiltration values, and the difference
17 in indoor design air temperature is going to have an impact
18 on those infiltration values, then all of a sudden some of
19 the comments about loads, summer, winter, perhaps what
20 we're doing is, we should retrace some of the progression
21 of those that we've made, and -- and for six years that
22 Ugly Duckling has been trying to point in a little different
23 direction.

24 I think this is a start, and we'll be glad to
25 try to contribute what we can to resolving some of those

1 other points from the technical and engineering basis.

2 CHAIRMAN SCHWEICKART: Mr. Ladine, I'm not clear
3 at all on what you're saying. Do you support this change
4 or do you not?

5 MR. LADINE: I -- of course, I recognize -- yes,
6 I basically will support it.

7 CHAIRMAN SCHWEICKART: All right.

8 MR. LADINE: I'm trying to understand how it's
9 going to relate to the electric resistance package is what
10 I was referring to.

11 CHAIRMAN SCHWEICKART: Well, if there is not a
12 change here, I think you're pulling yourself out of the
13 water, which I don't think you want to do.

14 MR. LADINE: Well, the -- in that sense I'll
15 leave well enough alone.

16 CHAIRMAN SCHWEICKART: All right. Are there any
17 further comments on this item?

18 All right. We're back, then, to the Committee
19 recommendation, and the multiplicity of options having been
20 exhausted, I think, elegant or inelegant, what action is
21 appropriate today, and I guess at this point I would turn
22 to the Committee for a summary of -- are there any -- is
23 there any difference of what it is you're presenting to the
24 Commission, and then I'd like to poll the Commission in
25 terms of its desire.

1 COMMISSIONER GANDARA: Okay. Let me say that,
2 as I recall from my mathematics, an elegant solution was
3 a perfect solution. That's just a term that's used in
4 mathematics, and is -- that one of the issues, should the
5 budget -- should the losses be included in the budgets, or
6 shall we go with the budgets that are presented, and I
7 recommend that we go with the budgets as presented.

8 On the issue of the 15, ten and five, I recommend
9 that those footnotes be retained, and that we have 15, ten
10 and five, as indicated here.

11 On the issue of the calculation method, I think
12 some useful points have been brought up on that, and while
13 I think that it would be entirely within the Committee's
14 initial recommendation, and while I think it would be very
15 useful to have the second sentence in the -- in the regula-
16 tions, to the extent that it might foreclose some options
17 that might be explored in the energy conservation manual,
18 you know, I -- if the Commission so desired, we could --
19 you know, the Committee would be amenable to deleting the
20 second sentence and all the footnotes, 2, 3 and 4, so that
21 at least in the energy conservation manual we might then
22 be able to address the issue of the -- of ducts in the
23 conditioned space.

24 However, let me -- let me add that that is not
25 a simple problem. We're going to have to get to issues

1 of what kind of ducts are there. Are they thin ducts that
2 increase the area or hit the dissipation? Are they -- you
3 know, it gets to be a real nest of worms.

4 On the other hand, it does seem to me that the
5 basic Committee considerations and recommendations were
6 involved with respect to the -- to the budget numbers, with
7 respect to the 15, ten and five, and while I think that
8 the second sentence is certainly an improvement, I think
9 it does advance the area that I think that they can be in
10 the energy conservation manual as well, without any loss
11 to anybody who has an interest in increasing the minimum
12 amount of insulation.

13 So, basically, the Committee finds acceptable any
14 one of two options there.

15 CHAIRMAN SCHWEICKART: All right. Well, I --

16 MR. STEEL: Chairman Schweickart, if I may, the
17 -- you can't take that sentence out and then calculate in
18 the calculation method, if that -- if the second sentence
19 is removed, then there's no option in the calculation
20 method to calculate extra duct insulation --

21 CHAIRMAN SCHWEICKART: No, if --

22 MR. STEEL: -- because it's not in the budgets --

23 CHAIRMAN SCHWEICKART: Excuse me, Mr. Steel.

24 MR. STEEL: -- and it's not in the footnote.

25 CHAIRMAN SCHWEICKART: Pardon me. In the -- the

1 second sentence I believe, in terms of the option presented
2 by Commissioner Gandara, would be refer to the compliance
3 manual as a means by which those who --

4 MR. STEEL: It's not consistent. The budget --
5 the budget number you'd -- the rules say you have to meet
6 the budget number, and unless you provide a mechanism for
7 dealing with extra insulation, either by putting -- as
8 we've talked about, putting the extra energy directly into
9 the budget, then you could deal with the mechanism in the
10 compliance manual, because you have to -- you have to pro-
11 vide a calculation technique to deal with that extra 15
12 percent you put in the budget.

13 But if you don't put the 15 percent in the budget,
14 you have to put the extra duct insulation issue in the
15 footnote, or there's no way to use the regulations to cal-
16 culate.

17 COMMISSIONER GANDARA: Mr. Steel, I'll propose
18 a third option.

19 I have a feeling that it doesn't address your
20 issue, but on the chance that it might, okay, that the
21 second sentence read as follows.

22 "The heating and cooling budgets may be
23 increased," omit the equation, and then continue,
24 "when the installed heating and installed cooling
25 system has ducts in unconditioned space and duct

1 insulation R-value RV graded 2.1."

2 And then address the issue of the computation in
3 the energy conservation manual.

4 MR. STEEL: I appreciate your attempt, but I
5 believe that it still wouldn't work, because if you say
6 you just may increase it if you -- if you -- well, it's
7 close. It --

8 COMMISSIONER COMMONS: Well, let's get legal
9 counsel on the issue.

10 MR. STEEL: That's closer. You might get away
11 with that. At least you've addressed it and said you could
12 increase the budget, and then you would -- you would have
13 the calculation technique define it.

14 COMMISSIONER GANDARA: Let me then --

15 MR. CHAMBERLAIN: I have a certain concern about
16 -- about so obviously referring that to the manual, because
17 it seems to me you are describing here a requirement.
18 Normally that has to be done in regulations, and so -- I
19 mean I -- I recognize the desire for flexibility, but I
20 think you're taking a risk.

21 COMMISSIONER GANDARA: You're articulating my
22 original concern, Mr. Chamberlain, but Mr. Eley did point
23 out that in fact there are other calculation methods in
24 the energy conservation manual. Perhaps we can get a read-
25 ing from staff whether as they would really be equivalent

1 to the kind of thing we're talking about here, or whether
2 in fact the step here, the omission of that step here would
3 in fact introduce a significant distinction.

4 MR. CHAMBERLAIN: Well, aren't they on the other
5 side, though? They are on the side of the calculation of
6 how much energy a particular building will use, not on the
7 side of deciding what number it's to be compared to.

8 COMMISSIONER GANDARA: Well, again, let me get
9 the comment from the staff.

10 MR. HUSTON: I guess I'm a bit concerned with
11 just saying it can be increased. It seems like we need a
12 bit more guidance than that. You know, if we can it can
13 be increased to a maximum of 15 percent, and then show the
14 calculation procedure in the compliance manual, I would
15 feel less concerned with that language than simply saying
16 it has to be -- or it can be increased.

17 Clearly, there are more issues in making a duct
18 system more efficient than simply putting more insulation
19 in it, as we have heard many, many, many people talk about.

20 CHAIRMAN SCHWEICKART: All right.

21 COMMISSIONER GANDARA: There you are.

22 CHAIRMAN SCHWEICKART: Yes. I appreciate much
23 more the difficulty the Commission -- I mean the Committee
24 had at this point in dealing with the issue.

25 Commissioner Commons?

1 COMMISSIONER COMMONS: Yes. I'm going to change
2 my opinion and go along with Commissioner Gandara here for
3 the following reasons.

4 One is if we add a third algorithm to the equa-
5 tion, I'm very concerned about -- it's already complicated,
6 and I think it's more appropriate, and I think the comments
7 that have been made are correct, but that third computation
8 is harder than the other two, times I don't know what num-
9 ber, but it's a very difficult one has been brought out.

10 I'm very concerned all the way through on these
11 regulations, and the impact on the small builder. I'm not
12 sure at this stage if the small builder can even exist and
13 construct, and anything we do that's going to make it more
14 difficult for the small builder, even if it's a little
15 bit fairer, I will tend to go for the simple path.

16 The fact that we do have the equation and it's
17 shown does make it at least so someone with a simple calcu-
18 lator can compute and, as was said, you go from one inch
19 to two inches, which is what really happens, one can make
20 that determination.

21 I am of the feeling that the five percent is too
22 low. If we're talking about two and a half percent of the
23 buildings, at least on the low side, the energy budgets for
24 the -- for the low-income people who might be living in
25 the apartments are -- we're certainly erring in the right

1 direction rather than the wrong direction, and I'm not sure
2 it's -- we have enough information to change it. If it's
3 seven and a half percent or ten percent, I guess I'll just
4 lose out on that one and not make the amendment to change,
5 and so I'm going to shift my opinion after the testimony
6 and support Commissioner Gandara's statement, but that does
7 include, as originally stated, with the formula.

8 CHAIRMAN SCHWEICKART: I think if there's nothing
9 further on this, the sense of the Commission is, but for
10 the grammatical issue of 2.15, et cetera, instead of "by,"
11 parens, ".15," that we have support for moving ahead,
12 inelegant though it may be, with the Committee recommenda-
13 tion.

14 We are -- I think at this point we can go back
15 to the solar issue. I think adequate time was provided.
16 Would someone care to state the -- is there an issue, let
17 me say, with the wording as proposed?

18 MR. MIZANY: Yes, there is.

19 CHAIRMAN SCHWEICKART: Yes, there is. All right.
20 If you would then --

21 MR. MIZANY: I'm Anoosh Mizany. I'm representing
22 CALSEIA. I'm on the -- I'm the co-chairman of the techni-
23 cal and standards committee of CALSEIA.

24 I was here in front of Commissioner Gandara's
25 Committee here about a month ago, and asked for some time,

1 and since then we have -- CALSEIA has responded in writing
2 to the proposed wording, and frankly today when I found out
3 that there is a new new wording, I was surprised why this
4 was not communicated to CALSEIA, although I was here. I
5 testified and I left my name. And --

6 COMMISSIONER EDSON: All right. Let me --

7 MR. MIZANY: So it put us in the awkward posi-
8 tion --

9 COMMISSIONER EDSON: I happen to know that CALSEIA
10 has been talked to. The staff may not have talked to you
11 specifically, but I know -- I think Mr. Ancis wrote
12 the letter to us on behalf of CALSEIA, and I think there
13 were lengthy discussions with him by several members of
14 the staff.

15 MR. MIZANY: Um-hum. But did Mr. Ancis see the
16 new new wording, versus what was in front of us a month ago?

17 MR. HUSTON: Yes. The wording that's here was
18 provided at the last Committee hearing by Gerald Steel, and
19 in the documentation I sent to CALSEIA I included Gerald
20 Steel's submittal to us, and said this was the language
21 that the staff tended to support, instead of the language
22 that was in the original staff report.

23 CHAIRMAN SCHWEICKART: I will accept your apology
24 on that.

25 MR. MIZANY: Okay. I don't know whether I should

1 apologize, or after having been and testified and having
2 left my name, that I was not contacted as someone who is
3 directly involved. The issue here is communication, not
4 formality.

5 CHAIRMAN SCHWEICKART: Let me absolve the
6 Commission from that. You are a member of an organization
7 that has an internal responsibility to communicate among
8 itself on critical issues, so -- I appreciate you may not
9 have heard of this, but I would say that the Commission,
10 on the testimony just given, is not responsible.

11 MR. MIZANY: All right. If that is the case,
12 then I do apologize for the internal mess-up.

13 CHAIRMAN SCHWEICKART: Nevertheless, please com-
14 ment.

15 MR. MIZANY: Nevertheless, I must say that I am
16 somewhat pleasantly surprised by the changes in the new
17 wording. As I talked to Mr. Huston, he pointed out that
18 the values and numbers given in the domestic or annual
19 water heating budget table will be modified downwards by
20 being multiplied by .76, which would compensate for the
21 inefficiency of the, let's say, gas water heaters. That
22 seemed like it would bring the number to a reasonable realm
23 where our original objection was that the previous wording
24 would necessitate systems so large that it would make the
25 cost of the systems prohibitive, and it would also cause

1 undue stagnation in the summer months.

2 However, after giving a few moments of thought
3 to the idea of reducing these numbers in the budgets in
4 Table 2-53S, by the efficiency, which meaning that we would
5 multiply that by .76, assuming that a gas water heater has
6 an efficiency of .76, to arrive at a number that the solar
7 should contribute, then I thought, well, what if you switch
8 to a more efficient back-up water heater. That might make
9 the number .8. Does that mean, then, that you would have
10 to supply a greater proportion by solar because you're
11 going to a more efficient heater?

12 So there seems to be an inconsistency here that
13 perhaps Mr. Huston can shed some light on.

14 This is one issue, and I have another separate
15 issue. I don't know whether I should wait here and seek
16 Mr. Huston's further explanation, or go on to the other
17 issue and wait for him to respond on that.

18 CHAIRMAN SCHWEICKART: All right. Let -- again,
19 I would invite Mr. Huston to respond to this comment, but
20 I would like first to understand what you said.

21 MR. MIZANY: Okay.

22 CHAIRMAN SCHWEICKART: Are you recommending a
23 change in the proposed wording, or do you support the
24 proposed wording?

25 MR. MIZANY: No. I'm saying that I can support

1 the proposed wording, if I understand what this table
2 stands for, because the proposed wording refers to the
3 table, and Mr. Huston gave me an --

4 CHAIRMAN SCHWEICKART: All right. But the table
5 itself does not change, I believe. Is that correct?

6 MR. HUSTON: That's correct.

7 CHAIRMAN SCHWEICKART: All right. So then --

8 MR. MIZANY: The table does --

9 CHAIRMAN SCHWEICKART: -- knowing the table does
10 not change, do you support the proposed wording?

11 MR. MIZANY: Okay. If the table does not change,
12 no, I do not support the wording, but Mr. Huston did tell
13 me and did give me an example in this paper I have in front
14 of me that it would be multiplied by a factor of .76. To
15 me that's changing the value of the numbers that would be
16 used.

17 CHAIRMAN SCHWEICKART: Mr. Huston, would you
18 please clarify this?

19 MR. HUSTON: Yeah, I'd love to.

20 What the proposed amendment would do, it essen-
21 tially says that the solar system must reduce the water-
22 heating value in the budget by 60 percent, and those numbers
23 in Table 2-53S, the water-heating budget, were derived
24 based on an assumed efficiency of the water heater of 76
25 percent.

1 So in doing the calculation, and as I pointed
2 out to both of the representatives from CALSEIA in the
3 back of the room a few minutes ago, the compliance manual
4 will make it very clear that you take the number in the
5 table, you multiply it by .76 to get -- to back out the
6 efficiency of water heater, and then the solar system must
7 provide 60 percent of that number.

8 I did not state that we were going to change the
9 value in this table but, rather, the calculation procedure
10 in the energy conservation manual would make it clear that
11 that is the appropriate way to do the calculation to arrive
12 at what the language in the amendment says.

13 MR. MIZANY: I still fail to understand. If you
14 back out by multiplying the number by .76, then we go to
15 an 80 percent efficient heater, would that not then require
16 a larger solar contribution instead of a smaller solar
17 contribution?

18 COMMISSIONER EDSON: I would like to hear the
19 staff respond. I think this is related to the question I
20 asked earlier about why in A and B we have -- in Packages
21 A and B we're looking at solar with any type of back-up,
22 and in Package C we're looking at solar with gas only.
23 I think the concern is the same.

24 MR. GAUGER: The analysis done during the
25 standards development showed that -- that a solar system

1 with electric back-up essentially used the same energy as
2 the water tank with the R-12 blanket, which was required
3 in the standards. They were an energy trade-off. So in
4 Packages A and B, you can, without affecting the energy
5 use, use one or the other, water heater with a blanket or
6 solar system with electric back-up.

7 MR. HUSTON: Actually, any kind of back-up.

8 MR. GAUGER: Any kind of back-up.

9 MR. HUSTON: If it meets the budget with electric,
10 it will also meet it with a gas back-up, or with a heat
11 pump back-up.

12 COMMISSIONER COMMONS: But if you wrap both, you
13 are exceeding it with the electric back-up.

14 MR. HUSTON: That's correct. No. I --

15 COMMISSIONER COMMONS: I think that's the ques-
16 tion that's being asked here, and is the effect that you
17 over-size your solar system.

18 MR. HUSTON: No.

19 COMMISSIONER COMMONS: In C.

20 MR. GAUGER: Okay. I --

21 COMMISSIONER COMMONS: Okay. Then that's -- maybe
22 you could help me by explaining why not.

23 MR. MIZANY: I don't still see it. Let me just
24 ask a hypothetical question.

25 COMMISSIONER COMMONS: You aren't the only one.

1 MR. MIZANY: Supposing we go to, let's say, an
2 instantaneous water heater, which presumably is more
3 efficient than a normal stand-by gas water heater. That
4 would give us, let's suppose for a moment, instead of 76
5 percent efficiency, that would give us, let's say, 90
6 percent efficiency.

7 Would they -- would we then take this number in
8 the table and multiply it by .9, that stands for 90 percent
9 efficiency, and wouldn't that give us a larger number for
10 solar requirement?

11 MR. HUSTON: And the answer to that is no. This
12 table will not change, regardless of the type of water
13 heater that you have. This is the budget. This is the
14 base case, and it's based on a gas water heater, a certain
15 water demand, a certain delta temperature, an increase in
16 temperature of the water heater, and when you tell me what
17 kind of system you have, what the efficiency of that system
18 is, we can --

19 CHAIRMAN SCHWEICKART: That's solar system, not
20 the back-up.

21 MR. HUSTON: Or whether -- or the instantaneous
22 system, or a system with an 80 percent efficiency, it makes
23 no difference. We can then compare your budget value with
24 the one in this table and know whether or not you are under
25 the water budget or over the water budget. If you're under

1 the water budget, you can take that savings and apply it
2 to your space budget.

3 This table, if -- for example, if somebody were
4 to put in a water -- a solar water heating system that met
5 the sizing requirements of the amendment, and at the same
6 time put in a higher efficiency water back-up system, they
7 would get the 60 percent credit for the solar system, and
8 additional credit for a higher-efficiency back-up water
9 system -- or conventional tank.

10 This table would not change.

11 CHAIRMAN SCHWEICKART: But how is that credit
12 used in Package C?

13 COMMISSIONER COMMONS: I mean the question is
14 whether or not that credit should be applied to the solar
15 system, whether you don't end up with more solar than is
16 correct. I think that's the question, isn't it?

17 CHAIRMAN SCHWEICKART: First of all --

18 MR. MIZANY: That's my question.

19 CHAIRMAN SCHWEICKART: -- are we dealing here with
20 establishing the budget, regardless of what you use, or are
21 we dealing with the prescriptive packages?

22 COMMISSIONER GANDARA: The original problem that
23 was presented here is that this provision was being inter-
24 preted for solar sizing, and that in fact what the basis
25 was for the setting of the standard, as explained to the

1 Committee, as presented by staff, was that they should meet
2 a percent of the budget, and when that became clear, there
3 was an agreement on that, but for CALPEIA's position on
4 this, and that the language provided by Jerry Steel in fact
5 dealt with that far more specifically as the concept,
6 rather than the sizing of the collectors.

7 So it seems to me that the sizing of the collec-
8 tors is a separate issue from whether the system delivers
9 what was assumed to be a certain percentage of the budget
10 in setting the standards, and that's -- that's where we are.

11 COMMISSIONER COMMONS: I still don't think my
12 question has been answered about applying where that --
13 whether in the case of Package C it's correct to take that
14 increased efficiency from the back-up and not use that to
15 allow a less efficient solar system.

16 MR. MIZANY: Or a smaller solar system.

17 COMMISSIONER COMMONS: Or a smaller solar system.

18 MR. GAUGER: That would happen.

19 MR. HUSTON: Well -- Package -- yeah. Package
20 C, I think we need to remember that there are infinite
21 trade-offs that you can make if you use the prescriptive
22 method or if you use the point system.

23 COMMISSIONER COMMONS: Yes, but --

24 MR. HUSTON: Package C essentially says that you
25 have to put in a domestic water-heating system that provides

1 a certain amount of energy, and your back-up tank has to
2 be gas, and has to at least meet the minimum requirements
3 of the State's appliance standard with an R-12 blanket
4 installed.

5 COMMISSIONER COMMONS: But why does it have to
6 be gas? That's one question.

7 MR. HUSTON: If it has.

8 COMMISSIONER COMMONS: The other question is --

9 MR. GAUGER: Because you can't meet the budget
10 if you use electric. Electric back-up will not give you
11 a budget for Package C.

12 COMMISSIONER COMMONS: So in areas without gas,
13 that package is not available?

14 MR. STEEL: Propane. You always have either
15 propane or natural gas.

16 MR. GAUGER: But there's a significant difference
17 between solar with electric back-up and solar with gas
18 back-up.

19 COMMISSIONER EDSON: I understand.

20 MR. GAUGER: And if you use the electric back-
21 up in Package C, you will exceed the budget, because the
22 other measures have been reduced to compensate for the
23 efficiency of the gas back-up.

24 MR. MIZANY: May I --

25 COMMISSIONER COMMONS: I see.

1 MR. MIZANY: May I point out that this -- where
2 the reference is made to this table, the paragraph that
3 precedes that, in other words the beginning of 2-5351(c)9,
4 starts by saying that solar domestic water heating systems
5 with electric resistance back-up heating, installed to meet
6 the requirements of Packages A or B, or -- and goes on to
7 say C.

8 So the way I understand it, unless I -- I'm too
9 dense this late in the day, that all A, B and C packages
10 are referring to what follows, which is that the solar
11 collectors must be sized to this and that, so we are talk-
12 ing about this table being used for Packages A, B or C,
13 the way I see it from this number in (c)9.

14 Am I wrong in that understanding?

15 MR. HUSTON: No, that is true.

16 MR. STEEL: For Packages A and B, using gas back-
17 up, this doesn't apply.

18 MR. MIZANY: I see. Okay. Now I understand.
19 Clear. All right.

20 So in the light of that, I must admit that I
21 must have misunderstood Mr. Huston when he was explaining
22 that .76 multiplication, and that the numbers are developed
23 based on gas water heaters, and that these numbers will
24 indeed be used directly without further reduction in their
25 value. Am I correct, Mr. Huston?

1 MR. HUSTON: That's a hard question because, as
2 I -- as I stated on the record a few minutes ago, the
3 calculation procedure will make it clear that you multiply
4 that number by .76, which reflects the efficiency of the
5 water heater that was assumed for these values.

6 MR. MIZANY: Okay. Would it be appropriate, then,
7 to add a footnote to this section on -- when we are
8 referring to Table 2-53S, that there would be a .76 multi-
9 plier to correct for the efficiency of the gas water heater
10 assumed or, since this table was developed particularly for
11 this purpose, with that 76 percent efficiency, could we
12 not just reduce these numbers by 76 percent, or down to 76
13 percent?

14 CHAIRMAN SCHWEICKART: Excuse me. Let me try to
15 step in here.

16 What we have here is the budget. You must meet
17 60 percent of the numbers in Table 2-53S, depending on your
18 climate zone, with your solar system. All right. But, now,
19 if your solar system is ten percent efficiency, ten percent
20 efficient, versus some other solar system that's 89 percent
21 efficient, that changes the sizing of the solar system,
22 but in either case it has to meet 60 percent of the budget.
23 All that 76 percent does is in the calculation method is
24 allow you to work that out, depending on the efficiency of
25 your solar system.

1 MR. MIZANY: Okay. Then --

2 CHAIRMAN SCHWEICKART: There's no change in the
3 requirements of the person who uses that system at all,
4 in terms of the percentage of the total budget that must
5 be met, the total water budget for their family or their
6 house that must be met.

7 All right. So this defines the standard, and I
8 think is quite clear in doing so. We -- I think that it's
9 very clear that you use the compliance manual in order --
10 because you've got an 85 percent efficient system, to
11 figure out what size that has to be. It's a different issue
12 from the budget, which is what we're dealing with here.

13 MR. MIZANY: Okay. So it would not be appro-
14 priate to have a footnote clear.

15 CHAIRMAN SCHWEICKART: No.

16 MR. MIZANY: Okay.

17 CHAIRMAN SCHWEICKART: I mean --

18 MR. MIZANY: It's just a question.

19 CHAIRMAN SCHWEICKART: What you're doing with
20 the footnote is moving to the compliance manual and how you
21 get there into the establishment of the standard, which is
22 not appropriate.

23 MR. MIZANY: Okay. The next matter I want to
24 bring up is that, while this would work in the form -- in
25 the -- proposed in the new wording, as far as the

1 compliance of passive domestic hot water systems, such as
2 ICS integral collectors, the storage systems, and thermal
3 sizing system, as you know, these are trouble-free, eloquent
4 ways of heating domestic hot water, and I don't believe
5 there is a single unit on the market right now that would
6 comply with this 60 percent criteria.

7 Therefore, I -- I suggest that if this package --
8 and I understand that we are working with budgets, so that
9 we are limited in terms of what percent contribution there
10 could be. Might then -- might it not then be appropriate
11 for the Commission to consider an additional package so
12 that a 50 percent contribution by a passive domestic hot
13 water system can be worked in as an option to the builder
14 or the homeowner?

15 CHAIRMAN SCHWEICKART: Again, Commissioner
16 Gandara?

17 COMMISSIONER GANDARA: Under our current regula-
18 tions, such a package can be submitted and will be reviewed
19 by the Commission.

20 MR. MIZANY: Would the Commission consider a
21 Package D as worded in CALSEIA's proposal to the Commission
22 as -- or I don't think it's been labeled as Package D, but
23 50 percent has been -

24 CHAIRMAN SCHWEICKART: Let me say that the
25 Committee addressed the issue which you raise right on the

1 mark, and is recommending that these systems can be used,
2 using the point system, or the computer methodology under
3 a performance basis. They are not included in the -- in
4 the prescriptive packages. They are not in any way barred
5 from use. They are not included in the prescriptive pack-
6 ages.

7 MR. GAUGER: But they could be, if CALSEIA wanted
8 to present us with a package review.

9 CHAIRMAN SCHWEICKART: Yes. And I would recom-
10 mend, if you want to pursue that, that you do so, but I
11 -- I don't believe that that is appropriate today. It
12 cannot be done today. There is not a record to support it.

13 COMMISSIONER EDSON: Mr. Mizany, let me make
14 sure that you and CALSEIA understand what's being suggested.
15 I guess first of all those systems can be used under the
16 point system or the performance approach to complying to
17 the standards.

18 Secondly, a package can be developed, but we're
19 -- we need to rely upon the industry to bring that package
20 to us in those suggestions, and identify the trade-offs to
21 account for the lowered efficiency.

22 CHAIRMAN SCHWEICKART: And I --

23 COMMISSIONER EDSON: And the burden is on you,
24 and I just want to make sure that's very clear in these
25 discussions.

1 MR. MIZANY: I understand that.

2 CHAIRMAN SCHWEICKART: Well, and I -- and it
3 should also be stated, and I'm running into the same kind
4 of thing in the nonresidential building standards proceed-
5 ing which is ongoing at the present time, that the whole
6 concept of having the packages and a prescriptive method-
7 ology was to provide a simple way to meet the standards for
8 those who did not care to use the performance method, and
9 the degree to which the Commission on a repeated basis
10 considers additional packages for special purposes, whether
11 it's passive hot-water systems or whether it's radiant
12 heat, and electric resistance heating, or heavy walls, or
13 helium-filled floors, or whatever the devil it is, we end
14 up with a proliferation of these packages, which at some
15 point the Commission has to say, no, use the point system,
16 that's what it's there for.

17 COMMISSIONER COMMONS: Chairman Schweickart, I
18 would like to respond to that, because I think you and I
19 have a difference of opinion over the possible use of
20 packages. There are two points I want to make as it relates
21 to passive solar.

22 I think Mr. Mizany pointed out that these passive
23 systems are in many ways the coming thing. There are ways,
24 low-cost ways to provide solar hot water, and it's probably
25 the area where you're most likely to see large numbers of

1 solar systems installed in new construction in tract hous-
2 ing, for example, although that may not be the case. It is
3 my impression, certainly, which in my mind makes it
4 entirely appropriate for a new package, and I guess the
5 more generic comment I have is that I have no aversion at
6 all to 4,000 packages.

7 I don't -- I don't see anything wrong with having
8 manuals of packages produced. It -- if it's simpler for
9 people to comply and people can come in and demonstrate to
10 us they comply with the standards, I'm perfectly willing
11 to move forward.

12 CHAIRMAN SCHWEICKART: At some point in the future
13 you may convince me, but it's not an issue tonight.

14 COMMISSIONER EDSON: I understand.

15 COMMISSIONER COMMONS: It's 1409(d).

16 COMMISSIONER GANDARA: And let me add that --
17 that, at least what we've said before, is that the package
18 should apply to significant construction, and should we
19 have 4,000 packages divided into, what, 88,000 homes, you
20 know, I think we're -- we're running into some problem,
21 but --

22 MR. STEEL: Let me just -- 250.

23 MR. MIZANY: Thank you very much.

24 COMMISSIONER GANDARA: Anyway, let's proceed.

25 Page 6?

1 CHAIRMAN SCHWEICKART: All right. 1408(a).

2 COMMISSIONER GANDARA: We've already dealt with
3 that. That is -- you know, you either buy the three
4 changes, you know -- where we started out in 2-5301(a)(2),
5 or we buy none of them at all, and we retain it. So that's
6 the option.

7 Mr. Ruby?

8 MR. RUBY: 1408(a)?

9 CHAIRMAN SCHWEICKART: Well, yes, but I -- I'm
10 trying to figure out what Commissioner Gandara just said
11 and what I'm missing here.

12 COMMISSIONER GANDARA: Yes. Okay. Basically,
13 there are three changes that are all interrelated. Where
14 it all started was with 1408(a)(1) that we proposed to be
15 omitted. When that was omitted, then it was recommended
16 that -- you know, it was then recommended by CBIA that we
17 add it in 2-5301(a)(2), and when we did that then it was
18 necessary to add a definition in a portion of 2-5302, so
19 -- now, we had a lengthy discussion on that with Mr. Ruby
20 and Mr. Collin, and I suggested to the Commission that,
21 one, we -- that the choice would be either not to undertake
22 any of these changes, which means that we just retain
23 1408(a)(1), and not do the other two changes in the two
24 sections, or that we undertake the three changes at the
25 same time. But --

1 CHAIRMAN SCHWEICKART: Well, all right, but that
2 -- we still -- I think the comment may still be appropriate
3 on this, nevertheless. Is that not the case?

4 COMMISSIONER GANDARA: Well, I'm hard-pressed to
5 to find out why, but you can go ahead, Mr. Ruby. I don't
6 have any objection.

7 MR. RUBY: I think I can answer why. Earl Ruby --

8 CHAIRMAN SCHWEICKART: Well, maybe he's spelling
9 a word wrong, for example.

10 MR. RUBY: Earl Ruby, CBIA.

11 After about 50 minutes of legalese, I think per-
12 haps the issue got heavily obfuscated this afternoon.

13 The reason that we started on this round several
14 hearings back was that we feel that there are three dif-
15 ferent conditions that can occur under 2-5402.1. The first
16 one of these is where the builder has the building permit
17 prior to the effective date of the -- or the trigger date
18 of the energy standards. In that case, he works only to
19 the old energy standards.

20 The second condition is where some soft costs
21 have been expended, but there's been no actual construction
22 started or permit issued, and that is the type of condition
23 that 1408(a) addresses.

24 The third condition that we spent a considerable
25 amount of time earlier this afternoon on is the little

1 paragraph (f), which says that if you have started con-
2 struction and site preparation, which we're not quite sure
3 what that means, but in the event that you have done that
4 prior to the trigger date of the new standards, you nego-
5 tiate with the local building official.

6 Now, those three different conditions appear to
7 have been compressed into two by the rewrite that we dis-
8 cussed earlier this afternoon, and what I would like to
9 propose to -- to meet your deadlines and satisfy inner-
10 cycle social needs would be to -- since we are not satis-
11 fied with the proposal -- the definition that you have
12 proposed for site preparation and local conditions, to
13 scrub both of those changes, do not submit them, to include
14 the 1408(a)(1) that is presently lined out, and go to
15 perhaps, as originally printed, with no -- with Public
16 Resources Code 2-5402(f) not addressed.

17 And I think that it's preferable to address two
18 of the three conditions and have it in code, rather than
19 to try to address all three conditions with a definition
20 for site preparation and construction that we don't agree
21 with.

22 So by -- by doing this, you would be specifying
23 in the -- in the code the exemption procedure where con-
24 struction has not started, and also the exemption procedure
25 that is in existence if you have a permit prior to the

1 trigger date for the new standards.

2 COMMISSIONER GANDARA: I'm confused, Mr. Ruby.

3 MR. RUBY: Well, I think what you were proposing,
4 Commissioner Gandara, was that we scrap the whole thing and
5 go back to as originally written. Is that not correct, sir?

6 COMMISSIONER GANDARA: No. I was saying that the
7 Commission should do one or the other. All or nothing.
8 Okay?

9 MR. RUBY: Well, we're saying nothing looks like
10 the better option.

11 COMMISSIONER GANDARA: Okay. Which is -- which
12 does not include the changes in the two previous sections.

13 MR. RUBY: That's correct.

14 COMMISSIONER GANDARA: And to retain this lan-
15 guage.

16 MR. RUBY: Yes. And concomitant with that,
17 where you have lined out 1408(a)(1), to keep that text in
18 the standard, which I believe it appears in the standard
19 now.

20 COMMISSIONER GANDARA: A total reversal of your
21 position.

22 MR. RUBY: Right, the last time I looked. Okay?

23 MR. RATLIFF: Commissioner, I might just remind
24 -- I mean I know you certainly are aware of this, but the
25 reason we proposed deleting that was because of the

1 confusion expressed by members of Mr. Ruby's industry who
2 said that that, one, seemed to indicate to them that they
3 would not be eligible for a claim of exemption if they had
4 in some manner commenced site preparation and construction,
5 and that's very confusing, because people who have com-
6 menced site preparation and construction don't need a claim
7 of exemption, and that was one of the things that we were
8 trying to clear up by deleting that section that we have
9 here.

10 So I think that leaving it in is something that
11 only creates mischief for everyone, and I see no reason
12 to retain it, whether or not we add the other provision
13 that we've spoken to.

14 COMMISSIONER GANDARA: Thank you, Mr. Ratliff.
15 I was trying to clear up what CBIA's present position was,
16 which isn't necessarily the one that's going to be recom-
17 mended by the Committee --

18 MR. RUBY: Sure.

19 COMMISSIONER GANDARA: -- because the Commission
20 can recall that it was this section that was the subject
21 of long and detailed discussions to your 1843 --

22 MR. RUBY: And Mr. --

23 COMMISSIONER GANDARA: -- and the problems it
24 created.

25 MR. RUBY: Mr. Ratliff's point is very well

1 taken, is that we did raise that objection for that reason.
2 The concern I have now is that we have taken legislation
3 and interpreted that legislation by Energy Commission fiat
4 to mean something that we question whether it means that
5 or not, Dick, and thus the issue of site preparation and
6 construction.

7 MR. RATLIFF: Well, I know that leaves this
8 undefined phrase in our standards, which I think creates
9 double mischief, because not only is it confusing, but then
10 you have this phrase that no one knows what it means, so
11 I think if we leave it in here, perhaps it's still neces-
12 sary to define it. It's someplace --

13 CHAIRMAN SCHWEICKART: Let me say that I don't
14 think that the Commission is being advised, frankly, by the
15 discussion at the moment, and it's my feeling that the
16 Commission, having spoken earlier on the other issue, that
17 it's quite clear that the redundancy is simply confusing,
18 and that the Committee recommendation is appropriate, given
19 the earlier statements of the Commission.

20 I guess what I'm saying is I finally understood
21 what you said at the outset, Commissioner Gandara.

22 COMMISSIONER GANDARA: Yes. The Committee recom-
23 mendation is as presented to you.

24 CHAIRMAN SCHWEICKART: Yes. All right. Further
25 comment?

1 COMMISSIONER COMMONS: Yes.

2 CHAIRMAN SCHWEICKART: Commissioner Commons.

3 COMMISSIONER COMMONS: We have here done some-
4 thing that's not been done in any jurisdiction in the
5 United States. There's no county, no building department,
6 no builder, no homeowner, who has ever heard of the defini-
7 tion that we have suggested and are using again in this
8 section, that actual site preparation and construction is
9 any construction activity undertaken in reliance upon a
10 foundation or building permit.

11 We have created an aberration here. We've defined
12 something that has no meaning, no reasonableness, and we're
13 using it again in this paragraph.

14 If you want to say it gets triggered --

15 CHAIRMAN SCHWEICKART: I'm sorry, but we are not
16 using it in this paragraph, which is the point.

17 COMMISSIONER GANDARA: The Committee recommenda-
18 tion is to--

19 COMMISSIONER COMMONS: Well, but we're considering
20 whether or not we should eliminate it, and I'm saying that
21 maybe we should consider keeping it in.

22 CHAIRMAN SCHWEICKART: Well, then, it's in the
23 existing standard. I mean that's the point. So we're not
24 creating it. It's a question of whether or not it should
25 be deleted.

1 COMMISSIONER COMMONS: No. I'm saying that let
2 us go back to the original, but let's define it in a sense
3 that is reasonable.

4 CHAIRMAN SCHWEICKART: All right. Then I think
5 we've dealt with that before, and unless you have,
6 Commissioner Commons, a definition of site preparation and
7 construction which you wish us to consider, going back
8 again to the earlier item, then it seems to me we've essen-
9 tially spoken to the point.

10 COMMISSIONER COMMONS: Well, I think we don't
11 have to define the term. I think we can say it gets
12 triggered by a particular action, which we had testimony
13 from the City of Stockton Building Department that it gets
14 triggered when someone takes out a foundation or building
15 permit, and it's not necessary in these regulations to
16 actually define the term.

17 All we're caring about is that there be an easy
18 method of saying at what point in time does that occur,
19 and the suggestion was when we have a foundation or build-
20 ing permit, so it gets triggered at that time. It doesn't
21 matter whether or not you've done your site preparation or
22 construction. It only gets triggered if you have a founda-
23 tion or building permit, and we don't have to get into this
24 aberration of the language which we have created in this
25 ordinance, or regulation.

1 MR. GAUGER: Well, that's not a new aberration,
2 though. That is in the 1978 standards and has been in
3 force for up -- up till July of this year, or of '82.

4 COMMISSIONER COMMONS: I do not believe there
5 was any language which said in the definition that "actual
6 site preparation and construction is..."

7 In reviewing the definitions that have been pro-
8 posed and that exist, we do not have that definition any-
9 where.

10 CHAIRMAN SCHWEICKART: All right. Let me say
11 again that, in providing guidance here, the sense of the
12 Commission is to support the Committee recommendation here,
13 which I think is what we're trying to resolve.

14 1409(d). Again, is there any -- yes, Mr. Ruby.

15 MR. RUBY: Real quick informational question,
16 and this came up in our Phase II training yesterday.

17 If the Commission certifies an additional ACP,
18 once that certification is complete, is the builder then
19 free to use that -- that additional package, or is there
20 some further interaction with the State Building Standards
21 Commission, and so forth?

22 CHAIRMAN SCHWEICKART: The former.

23 COMMISSIONER GANDARA: The former. It's
24 certification by the Commission.

25 MR. RUBY: It's clear to be used immediately.

1 COMMISSIONER GANDARA: It's a compliance standard.

2 MR. RUBY: Okay.

3 CHAIRMAN SCHWEICKART: That's correct. On adop-
4 tion.

5 MR. GAUGER: That they have shown compliance by --

6 MR. STEEL: Certification.

7 CHAIRMAN SCHWEICKART: On certification. Right.

8 Thank you, Mr. Steel.

9 MR. RUBY: But certification is the last step in
10 the process, then.

11 CHAIRMAN SCHWEICKART: Yes. I believe legally --
12 correct? Say yes, Dick.

13 MR. RATLIFF: Unless we decided to do otherwise.

14 COMMISSIONER EDSON: Yes.

15 CHAIRMAN SCHWEICKART: Commissioner Commons.

16 COMMISSIONER COMMONS: Yes. This one is a sec-
17 tion I'm particularly uncomfortable with. I don't under-
18 stand. I happen to own a lot and a piece of land, and I've
19 decided I'd like to build on this piece of land, and I
20 have a package. It turns out, like all land, this parti-
21 cular piece of land is unique, and whether or not there is
22 another unique piece of land like my land, or where this
23 package would fit, seems to me totally irrelevant in terms
24 of whether or not I should be allowed to proceed.

25 One possibility that I could see here is, first

1 of all, my preference is to strike everything after
2 2-5351(a). I can find no basis, and I don't even under-
3 stand what it means, as what is a significant percentage.
4 As far as I'm concerned, a significant percentage is my
5 application, because that's the one that counts.

6 But what we might want to is, where -- where you
7 have a situation where -- and you have this happen legally
8 in administrative proceedings, where you want to grant an
9 exemption on a package, but it does not become a standard
10 that can be used, we could have a procedure where the
11 Executive Director is allowed to grant a package, but it
12 can only be used for that specific project, and where you
13 want to have a package that can be generally used, then it
14 would go to the Commission.

15 However, I'm perfectly happy to have the Commission
16 look at all the packages, if that would be the preference
17 of the Commission. However, the concept of a significant
18 percentage, as far as I'm concerned, that stifles initiative,
19 makes it more difficult for people who own land, and it --
20 it is an example of overregulation, and I find this probably,
21 of all the items that we have before us, the most objec-
22 tionable sentence, and the hardest for a small builder or
23 for someone with a unique piece of land, in order to work
24 with it.

25 COMMISSIONER GANDARA: I guess I don't understand.

1 You want a package to be applicable to only one residence,
2 one building?

3 COMMISSIONER COMMONS: Well, I don't think it
4 should be a criteria on a package as to the number of
5 properties, and for us to have to go through a four-hour
6 discussion assessing whether or not this package is going
7 to be applicable to a piece of land that we don't even
8 know about in Contra Costa County or in Stanislaus or in
9 San Diego is putting an enormous burden upon the applicant
10 to come in and demonstrate that the particular package that
11 the builder is presenting is actually going to apply to a
12 significant percentage.

13 It's a vague, ambiguous term, and it's certainly
14 beyond I think the responsibility of the builder to even
15 get into -- into having to show that burden of proof. If
16 he has -- if he has a piece of land and he comes up with
17 a package that meets our criteria, my belief is that the
18 assumption should be that there will be other pieces of
19 land that it will also apply to, and that burden shouldn't
20 be upon him, and if it turns out it's unique that will be
21 a very unusual situation, but be it as it may, he has taken
22 the effort and the trouble to -- and the enormous expense
23 to try to develop that package to fit his piece of land,
24 and be that, I would fully endorse and support his applica-
25 tion.

1 COMMISSIONER GANDARA: I guess I'm -- perhaps
2 I misunderstand something. I don't understand why such a
3 person with a limited design would not just use the point
4 system for compliance. Why would -- why would you want to
5 have a package unless you were going to use it?

6 COMMISSIONER COMMONS: I do not want to bias --
7 if you want to say, then, that we have a regulation that's
8 based on the point system, we've already been told that
9 performance standards are going to be used only by five
10 percent.

11 Now you're telling me, well, we're really only
12 going to be down to the point system, and I say, no, if
13 we're going to provide three alternative systems, they have
14 to be available and usable, and if I have a piece of land
15 and I want to put a package together and not go with your
16 point system for one reason or another, I think that has
17 to be available to the person on his property.

18 CHAIRMAN SCHWEICKART: Commissioner Commons, I
19 think it's important to understand that the person who puts
20 the package together meets -- by definition, meets the
21 point system, and it's much cheaper, clearly, to meet --
22 if you have a piece of land that you want to build any-
23 thing on, it's far cheaper, almost without saying, to
24 design that using the point system than it is to prepare
25 a package and try somehow to get a whole package to the

1 Commission so that others may build by it in some way,
2 other than just what you're interested in. I mean it's
3 -- the packages by definition exist in order to provide
4 convenience for the building community where there are --
5 where there is general utility in having a prescribed
6 method, so that many people don't have to independently
7 calculate something, but if you have a unique situation,
8 your expense is clearly much greater in trying to carry
9 the weight of presenting a -- a package to the Commission
10 than it is to simply comply with the point system and
11 build whatever you want.

12 COMMISSIONER COMMONS: I can see -- I'm sorry.
13 I can see no justification in putting a burden upon a
14 builder to show that the package that he is proposing is
15 going to benefit another parcel of land, to identify the
16 parcels of land, and to show that this package is appli-
17 cable to somebody else. We're putting an unfair burden
18 on the applicant.

19 MR. GAUGER: If a person had done the analysis
20 to put together the package, and had only one building in
21 mind, he would not come to us to create a package. He
22 would go to his building department and apply for his
23 building permit, because he has done exactly what's
24 required to get his building permit.

25 CHAIRMAN SCHWEICKART: Let me suggest we move on.

1 MR. GAUGER: So there would be no reason to come
2 to us.

3 CHAIRMAN SCHWEICKART: I don't believe we have
4 an issue here for the rest of the Commission, and I think
5 it's something which we can clearly discuss further out-
6 side, so I -- I don't think it's important to take up
7 further time here.

8 COMMISSIONER GANDARA: Well, I think it may be
9 a misunderstanding.

10 CHAIRMAN SCHWEICKART: It is a misunderstanding,
11 but I -- I don't think we should try and take up every-
12 body's time in further explanation of the very nature of
13 the package or a point system, in terms of a builder
14 having a minimum obligation in terms of meeting regula-
15 tions.

16 COMMISSIONER GANDARA: I would agree. I would
17 just like to assure Commissioner Commons that the burden
18 and problem that he's concerned about doesn't exist, and
19 I would like to have an opportunity to explain it to you
20 further, but really I think what you're suggesting would
21 place a greater burden on such a person.

22 CHAIRMAN SCHWEICKART: Clearly.

23 COMMISSIONER COMMONS: Well, I don't see how it
24 can create a greater burden, because he would still have
25 the alternative of going for the point system.

1 CHAIRMAN SCHWEICKART: Because it's --

2 COMMISSIONER COMMONS: It would create an alter-
3 native that no one in their right mind would ever contem-
4 plate using.

5 MR. GAUGER: That's true.

6 COMMISSIONER COMMONS: Then -- all right. Then
7 why do we -- why do we have it -- if no one in his right
8 mind would do it, why do we have it?

9 MR. STEEL: It would create a package. It would
10 create a package for one house. Many people will use the
11 existing packages that are set up for many houses.

12 COMMISSIONER COMMONS: All right. However, let's
13 say now I comply with the point system. Why can I not now,
14 since I have complied with the point system, call it a
15 package, and allow that point system now to be generally
16 available as a package for anyone?

17 And what I'm having to demonstrate, in order to
18 make that acceptable, and I -- and I'm very sorry to the
19 other Commissioners who do not think there is an issue,
20 obviously they have voted in favor of this issue or non-
21 issue before. We have a real difference of opinion,
22 because once I've gone through and developed the system,
23 and I've met the points, what I want done is to now allow
24 it to become a package, so if someone else does want to
25 use it they have the ability to use it, and I don't think

1 the burden of proof is upon me as the applicant to demon-
2 strate that particular package.

3 CHAIRMAN SCHWEICKART: Commissioner Commons,
4 they can.

5 COMMISSIONER GANDARA: They can.

6 CHAIRMAN SCHWEICKART: They absolutely can with-
7 out ever coming to the Commission, nor to you as the person
8 who has developed that design using the point system, have
9 to bring anything to the Commission.

10 COMMISSIONER COMMONS: No, because I -- the next
11 party who comes has to recalculate the points and go
12 through the effort, rather than taking the benefit of the
13 work that I have previously done.

14 MR. STEEL: What Commissioner Commons is suggest-
15 ing is not a bad idea, but the disadvantage of it is the
16 cost to the Commission of processing his package, and I
17 would suggest that you set up a procedure which may require
18 legislation to charge whoever submits packages a fee to
19 get a package rated that covers your cost, and then you
20 wouldn't need that sentence, "significant segment of the
21 community," because you would -- you know, you'd be running
22 with no cost to you if I wanted to bring a package in and
23 get it certified with my product in it.

24 COMMISSIONER COMMONS: That's the only argument
25 against what I'm suggesting here, and this ambiguity in the

1 language of "significant segment of the building, con-
2 struction and design community," I don't know what it means,
3 and I'd like to know if anyone here does know what it means.
4 What is a significant percentage? Is it one percent, or
5 is it 25 percent?

6 COMMISSIONER EDSON: I think that --

7 COMMISSIONER COMMONS: Is it 100 projects, or is
8 it ten projects?

9 COMMISSIONER EDSON: I would simply say that that
10 issue will be joined when someone brings a package before
11 the Commission, and the Commission says that's not signifi-
12 cant. I -- if it's not broken, don't fix it. If we don't
13 have a problem yet -- I happen to be sympathetic to what
14 you're suggesting, as I've stated earlier. I think that
15 there -- there's obvious advantage to manufacturers, for
16 example, of fairly exotic devices, to devise packages and
17 to offer them with their product when they go out marketing
18 those packages, and I personally don't see any policy
19 problem with that, except for the staffing requirements
20 that doing that willy-nilly would impose, and I -- but I'm
21 willing to forego joining that issue until we have a problem
22 before us.

23 COMMISSIONER COMMONS: All right. It doesn't say
24 that the Commission shall certify. It just says it may,
25 and so that would -- if you eliminate that last line, which

1 I can find no justification for, the Commission still has
2 the option of saying in this instance we want to look at
3 it, or in this instance we do not.

4 But I don't like to see a regulation that is in
5 force and effect, and I'll ask the Presiding Member, would
6 you tell me, in your Committee hearings or in your opinion,
7 what is defined as significant percentage, or significant
8 segment?

9 Someone had to have had some opinion in order to
10 come up with these words.

11 COMMISSIONER GANDARA: No, it never was an issue.
12 It never was an issue in any of the hearings. The only
13 issue that was raised with respect to this section was
14 considerable participant support that the Commission should
15 have the authority to certify the packages, as opposed to
16 the Executive Director. The basis for that recommendation
17 by most of the participants was again respecting
18 Commissioner Edson's position, was that the proliferation
19 of packages should not occur, that there should -- they
20 should rise to the attention of the Commission so that
21 there would be a reasonable trade-off between the use of
22 the point system, which ought to be encouraged, and that's
23 why that language remains unchanged, that the Executive
24 Director certifies the calculation methods, but the issue
25 really didn't come up, I think -- I suspect, because if

1 anybody uses the point system to design a home, essentially
2 they have that calculation, and unless there are very
3 unusual features taking the same assumptions, you know,
4 that in essence can be used and reused again, and all you
5 have to do is to just show the calculations to the building
6 official.

7 COMMISSIONER COMMONS: Would you accept as the
8 Presiding Member, instead of the word "significant,"
9 "reasonable"?

10 COMMISSIONER GANDARA: Again, I don't see any
11 problem with 1409(d) the way it is. I -- you know, I --
12 I don't really see -- I basically am of the feeling that
13 there ought to be exercised some considerable discretion,
14 and a -- over the proliferation of packages, and for that
15 reason I do think that those are criteria that should
16 remain so that the Commission can examine them on a case-
17 by-case basis, and I support the main language simply,
18 again, to provide the Commission that discretion.

19 I frankly don't feel that something that can be
20 done by the point system should be done by -- you know, by
21 packages.

22 COMMISSIONER COMMONS: All right. Well, at
23 least when we have the motions, I would like to make
24 amendments here.

25 CHAIRMAN SCHWEICKART: Well, again, so as not to

1 take up unnecessary time, I -- I would suggest that what-
2 ever amendment you prefer be addressed right now. I mean
3 the result will not be --

4 COMMISSIONER COMMONS: I thought you wanted to
5 have one overall motion and amendments at one point in
6 time.

7 CHAIRMAN SCHWEICKART: Well, as we have earlier,
8 Commissioner Commons, I -- I am in each case, and have in
9 each case, invited any recommendations that any Commissioner
10 has, vis-a-vis the overall recommendation of the Committee,
11 so that we can deal with that and indicate where we are
12 now.

13 In that manner, the motion brought before the
14 Commission at the end should not require further elabora-
15 tion. It's a matter of simply trying to deal with it in
16 sequence.

17 COMMISSIONER COMMONS: I understood your sequence,
18 but I also mentioned when we had our discussion earlier
19 that I -- I do intend to amend the motion in a few -- not
20 a large number of areas, and this would be one of the areas.
21 I think there is only one other amendment that I would
22 propose.

23 CHAIRMAN SCHWEICKART: All right. Well --

24 COMMISSIONER COMMONS: I can do it officially or
25 unofficially.

1 CHAIRMAN SCHWEICKART: Clearly you have the right
2 to handle it any way you want. I'm simply trying to -- to
3 deal with the interests of all Commissioners in the most
4 expeditious manner, but that's fine.

5 All right. Then we'll move on to 1409(d).

6 COMMISSIONER COMMONS: That's what we've been --

7 CHAIRMAN SCHWEICKART: Excuse me. Excuse me.
8 We're now to the footnotes on the unnumbered page following
9 page 6.

10 COMMISSIONER GANDARA: Okay.

11 CHAIRMAN SCHWEICKART: Footnote 1.

12 MR. LADINE: Excuse me, Mr. Commissioner. Could
13 I make comment on that 1409(d)?

14 CHAIRMAN SCHWEICKART: Oh, I'm sorry. Yes.
15 Mr. Ladine.

16 MR. LADINE: I would like to know what the pro-
17 cedures or the key element might be to trigger the con-
18 sideration of an alternate component package. Is it at
19 the whim or discretion of the Commission, or is there a
20 formal procedure whereby one could be submitted for evalu-
21 ation?

22 CHAIRMAN SCHWEICKART: There is a petition process,
23 Mr. Ladine, which has been recommended quite a number of
24 times to you, and the ACP -- any ACP that industry or
25 a furnace manufacturer or anyone else wanted to bring

1 forward would be dealt with in a formal manner by a peti-
2 tion.

3 MR. LADINE: Through the petition process. Is
4 that right?

5 CHAIRMAN SCHWEICKART: Directly to the Commission,
6 right?

7 MR. GAUGER: I think he's suggesting that he
8 might put together an alternative component package, and --

9 CHAIRMAN SCHWEICKART: I'm sure --

10 MR. GAUGER: But that's not a petition process.

11 COMMISSIONER GANDARA: No, he can just -- he can
12 just submit a --

13 MR. GAUGER: He can submit that to the Commission.

14 COMMISSIONER GANDARA: -- submit a package and
15 make a showing that his package meets the energy budgets.

16 CHAIRMAN SCHWEICKART: No, but Mr. Ladine is
17 asking a question of how does he assure that what he sub-
18 mits gets formally dealt with, and aside from the petition
19 process, I know of no existing established procedure which
20 says in ten days Mr. Ladine is noticed by somebody, or
21 anything else.

22 As far as I know, and correct me if I'm wrong,
23 a -- an ACP submitted by a petition to the Commission
24 would be a means, certainly, that exists of having formal
25 response to it.

1 COMMISSIONER GANDARA: You're correct. I mean
2 he could either just submit -- he could just submit the
3 package showing energy budget compliance or, as you say,
4 he could submit a petition to change the energy conservation
5 manual where the packages appear.

6 CHAIRMAN SCHWEICKART: Given Mr. Ladine's history
7 with the Commission, I would strongly urge you, Mr. Ladine,
8 to consider the formal petition, since it must be responded
9 to, and I fear that through the mail system getting screwed
10 up, if you did it some other way and it got lost, we might
11 hear from you.

12 MR. LADINE: Well, if we had ears to hear, the
13 process would have been a lot easier. I questioned the --
14 whether the petition process was used to identify the
15 alternate component package for electric heating, and I
16 suspect then you're saying either the petition process or
17 by the whim of the Commission such component packages can
18 be considered.

19 COMMISSIONER GANDARA: The Commission may, on
20 its own motion, certainly initiate things. Okay?

21 MR. LADINE: Is it submitted to the Committee or
22 to the full Commission?

23 COMMISSIONER GANDARA: The Commission -- the
24 Commission decided at the time it adopted the residential
25 building standards way back in June of 1981 that it

1 directed the residential building standards committee,
2 then composed of Commissioner Reed and Commissioner
3 Schweickart, and to develop electric resistance packages.
4 Okay?

5 And that was a -- would be a motion by the
6 Commission, I would imagine. Okay? That is an outstanding
7 obligation the Commission has taken upon itself.

8 CHAIRMAN SCHWEICKART: But the opportunity for
9 an external person would be to -- I mean the most obvious
10 way would be to submit a petition.

11 MR. LADINE: Well, what I'm leading to is, I
12 have a question about the procedure, and obviously a
13 petition would guarantee that. I did submit -- in fact,
14 it's interesting circumstances, which I won't go over now,
15 how this whole process involved, but in trying to submit
16 an alternative component package for radiant heating -- in
17 fact, you may recall, it was at a full Commission hearing,
18 and just previous to that full Commission we had a private
19 meeting in Mr. Gandara's office, at which time I -- the
20 electric industry was discussing an alternate component
21 package for resistance heating.

22 They were asked to submit their input, and we
23 were asked to submit our input. At that time I inquired
24 whether it would be possible to submit an alternate com-
25 ponent package for radiant heating, and there was no

1 response or reception at all on any part of the staff, and
2 then when we came back to the full Commission and got
3 through making the testimony -- I might remind
4 Mr. Schweickart that you asked the Public Adviser to find
5 out where our technology was at, and I certainly hope you
6 got --

7 CHAIRMAN SCHWEICKART: I beg your pardon, sir.
8 If you would please examine the transcript, I specifically
9 directed the Public Adviser to get together with you to
10 assist you in submitting a petition to the Commission.

11 MR. LADINE: Right. And your other words were
12 also to find out where this technology was at, besides --

13 CHAIRMAN SCHWEICKART: The Public Adviser's role,
14 I beg your pardon, has nothing to do with where technology --

15 MR. LADINE: I recognize that.

16 CHAIRMAN SCHWEICKART: The Public Adviser is not
17 a technological person.

18 MR. LADINE: Did you get his response? Did he
19 respond back to you before I ended up on disability, as to
20 what -- did he respond at all back to you personally,
21 unofficially, or otherwise?

22 CHAIRMAN SCHWEICKART: Mr. Ladine, excuse me,
23 but this --

24 MR. LADINE: Well, that's irrelevant. I'm sorry.
25 But the --

1 CHAIRMAN SCHWEICKART: -- but this is quite
2 frankly irrelevant.

3 MR. LADINE: But the thing is Mr. -- Mr. Steel
4 followed my testimony, and said what Mr. Ladine needs to
5 do is submit an alternate component package for radiant
6 heating, and Mr. Gandara agreed with him at that time,
7 and yet --

8 CHAIRMAN SCHWEICKART: That's terrific.

9 MR. LADINE: -- previous meetings -- at previous
10 meetings he did not recognize the fact that we even had
11 the right to submit. Now, this is a clarification I'm
12 seeking.

13 Now, if it's through the petition process, fine.
14 That's the question I asked. If it's through the whim of
15 the Commission, well, are you in a whimsical mood?

16 Finally --

17 CHAIRMAN SCHWEICKART: Mr. Ladine, the way in
18 which you can get the Commission to formally address any-
19 thing you want --

20 MR. LADINE: I understand. I've heard that.

21 CHAIRMAN SCHWEICKART: -- in fact turning blue,
22 is to submit a petition for us to do so, and we will
23 respond formally to any petition, so there is a specific
24 way to deal with it. If the Commission on its own motion
25 wants to do something, like turn blue, it may so move.

1 MR. LADINE: I suspect it just might after we do
2 submit.

3 CHAIRMAN SCHWEICKART: And we're about to.

4 (Laughter.)

5 MR. LADINE: Well, that's enough. Thank you.

6 CHAIRMAN SCHWEICKART: Thank you.

7 Footnote 1.

8 COMMISSIONER GANDARA: Okay. Footnote 1 again
9 is an example where a package could have been submitted,
10 but instead the proponents of light mass, light thermal
11 mass, instead preferred that the issue be treated by includ-
12 ing in brackets, in the original standards, what the value
13 would be, the minimum R value, for a light thermal mass.
14 This has been dealt with again throughout the proceedings.
15 There is to my knowledge no controversy and no issue here.
16 Dr. Aroni was here earlier, and he was here all day. I
17 think he had to leave to catch a plane.

18 CHAIRMAN SCHWEICKART: Are there any people who
19 wish to address Footnote 1?

20 Mr. Beavers.

21 MR. BEAVERS: No, I don't want to address it.
22 I'm saying it's okay.

23 CHAIRMAN SCHWEICKART: Oh. Terrific. Fine.
24 There being no controversy, I would suggest we move on.

25 COMMISSIONER GANDARA: Footnote 2.

1 CHAIRMAN SCHWEICKART: Footnote 2.

2 COMMISSIONER GANDARA: Okay.

3 CHAIRMAN SCHWEICKART: Mr. Ladine.

4 MR. LADINE: It's my understanding that on
5 Footnote 2 that heat pumps will qualify in these zones
6 under Packages A, B or C, without any modifications to
7 the budgets of those if they have a --

8 CHAIRMAN SCHWEICKART: With setback thermostats.

9 MR. LADINE: With a setback thermostat. Do I
10 understand that electric resistance or zone-controlled
11 radiant or convection systems would not be allowed under
12 any of those packages in any way?

13 CHAIRMAN SCHWEICKART: That's right. You have
14 a separate package, or will have on subsequent Commission
15 action.

16 MR. LADINE: But we're not allowed to participate
17 under the A or C packages, or the B, for that thing.

18 CHAIRMAN SCHWEICKART: That's correct.

19 MR. LADINE: Why, might I ask, do we consider
20 the heat pump and not the other systems?

21 COMMISSIONER GANDARA: I don't understand the
22 question.

23 CHAIRMAN SCHWEICKART: I don't either.

24 MR. LADINE: I didn't think you would. It's a --

25 CHAIRMAN SCHWEICKART: You want a separate

1 package, and you want to be in Packages A and C as well.

2 MR. LADINE: Well, I don't know why we have to
3 have an alternate component package in the first place.

4 CHAIRMAN SCHWEICKART: Well, you don't.

5 MR. LADINE: Can you explain that to me?

6 CHAIRMAN SCHWEICKART: Well, we -- if you wish,
7 we can reject that. Are you requesting that we reject the
8 alternative component packages for -- for radiant heat?

9 MR. STEEL: If I might save time, the -- the
10 reason that he's not in Packages A, B and C is because
11 there has not been data given to the Commission to show
12 that radiant zonal heating is equivalent to gas with a set-
13 back thermostat.

14 MR. LADINE: You're speaking with some rather
15 astounding authority here, Mr. Steel. Are you speaking
16 for the Commission, or on behalf of my industry that
17 supposedly you're saying hasn't submitted it?

18 MR. STEEL: The -- you haven't submitted the data
19 in their format.

20 CHAIRMAN SCHWEICKART: Excuse me. Please. If
21 you would please -- if you would please address the Chair.

22 MR. LADINE: Oh, in their format, in their format.
23 I can go along with that.

24 COMMISSIONER GANDARA: I think we should have an
25 estimate whether we're going to vote and be done with this

1 issue by fifteen till seven --

2 CHAIRMAN SCHWEICKART: Mr. Ladine, do you have
3 a specific recommendation or comment to the Commission on
4 Footnote 2?

5 MR. LADINE: Yes. I would think that in
6 Footnote 2 you should be able to include the first stricken
7 line, as well as the second line, and -- under Packages
8 A and B and C.

9 CHAIRMAN SCHWEICKART: Thank you.

10 Are there any questions?

11 Okay. Mr. Vermeulen.

12 MR. VERMEULEN: I will be brief.

13 Mr. Chairman, for the record my name is Phil
14 Vermeulen. I represent California SMACNA.

15 I would like to submit suggested language for
16 the second footnote there, which would say, in essence,
17 "Where natural gas is not available, heat pumps may be used
18 as an alternative."

19 In my arguments this morning, we discussed the
20 problems that the setback devices have right now. We do
21 not have a problem with them, I feel come July 1, 1984,
22 but until that time there are some serious problems with
23 respect to cost, reliability, availability, and for those
24 reasons I think it would be a travesty not to allow heat
25 pumps to be used in the interim.

1 Along come July 1, 1984, we'll be more than
2 happy to install setback devices, assuming that all the
3 parameters that we feel will exist come to being on July
4 1, 1984. You have a copy of it in front of you.

5 COMMISSIONER COMMONS: So you're saying that the
6 wording that is proposed should be amended to incorporate
7 this additional amendment.

8 MR. VERMEULEN: What I'm saying is that, in
9 essence, rather than putting what you have here, put the
10 wording, "Where natural gas is not available, heat pumps
11 may be used as an alternative."

12 COMMISSIONER COMMONS: But what about after July
13 1, 1984?

14 MR. VERMEULEN: Well, we voted earlier -- you
15 voted earlier this morning that, come July 1, 1984, setback
16 devices will be required, so that would be assumed that
17 that automatically would kick in.

18 COMMISSIONER GANDARA: It's called having your
19 cake and eating it, too.

20 MR. VERMEULEN: We -- I raise the issues that
21 are very valid that, you know, \$360 for a setback device
22 right now is outrageous. The availability, I told you this
23 morning that one of my contractors, it took him eight weeks
24 to get a Honeywell setback device right now.

25 COMMISSIONER GANDARA: It's not being required.

1 COMMISSIONER EDSON: It's not required for 18
2 months.

3 MR. VERMEULEN: But -- I understand that, but he
4 was trying -- one of his customers wanted one of them, he
5 tried to get it, and it took him eight weeks.

6 CHAIRMAN SCHWEICKART: Let me ask you, are there --

7 COMMISSIONER EDSON: Maybe you should order them
8 now so they'll have them on July 1st.

9 CHAIRMAN SCHWEICKART: Are there further questions
10 for Mr. Vermuelen about what he's proposing?

11 COMMISSIONER COMMONS: Yes. I --

12 CHAIRMAN SCHWEICKART: Yes. Commissioner Commons.

13 COMMISSIONER COMMONS: In these climate zones,
14 like we've had one testimony of two and a half percent of
15 the homes, how many homes -- or how significant is this
16 issue? Do you have any feeling?

17 MR. VERMEULEN: Of heat pumps?

18 COMMISSIONER COMMONS: Yes. I mean, the amend-
19 ment in the next 18 months, how many homes would switch --
20 how many dollars are we talking about?

21 MR. VERMEULEN: I don't have exact numbers, but --

22 COMMISSIONER COMMONS: Obviously, but --

23 MR. VERMEULEN: -- to put it in perspective,
24 where you don't have natural gas available, right now the
25 bulk of houses that are having a heating system put in are

1 having heat pumps put in right now, and that's whether --
2 regardless if it's up in the Sierras, or whatever, and I
3 could show documentation of -- most of the houses being
4 built up in the mountains do have heat pumps put in them.

5 COMMISSIONER COMMONS: Are we talking about five
6 percent of the homes in the state, 20 percent?

7 MR. VERMEULEN: I would venture to say -- I can't
8 give you an exact number of heat pumps, but I would venture
9 to say 95 percent of the homes in -- where natural gas is
10 not available, heat pumps are being put in right now. Okay.
11 Does that help?

12 COMMISSIONER COMMONS: And what percent of the
13 homes in the state are where you do not have natural gas?
14 And it's only in these five climate zones, six climate
15 zones.

16 MR. VERMEULEN: Right. I don't have a number.
17 Maybe the staff can help me on that.

18 MR. GAUGER: The only guidance I can give there
19 is the criteria that established these six zones to begin
20 with is that they have an insignificant cooling load, or
21 a very small cooling load, so we're talking about the cold
22 regions of the state. Typically, those are the most
23 unpopulated, so --

24 COMMISSIONER COMMONS: Are we also talking about
25 an area where possibly a number of the homes that are being

1 constructed are second residences, or summer homes?

2 MR. VERMEULEN: I -- ten years ago I probably
3 would have agreed with you.

4 COMMISSIONER GANDARA: Not necessarily.

5 MR. VERMEULEN: But not today.

6 CHAIRMAN SCHWEICKART: No, because there's
7 coastal homes and second homes --

8 MR. VERMEULEN: Yeah.

9 COMMISSIONER GANDARA: And San Francisco --

10 CHAIRMAN SCHWEICKART: It's not applicable.

11 Mr. Vermuelen, would you acknowledge that, were
12 we to do this, we would essentially, since we have clearly
13 stated on many, many occasions that heat pumps with set-
14 back thermostats are equivalent to natural gas, and since
15 we are -- and I'm going to presume here that we will move
16 forward with the radiant heat and the electric resistance
17 packages, that they are in fact designed to meet the budget,
18 that were we to take your recommendation we would clearly
19 be biasing against Mr. Ladine, radiant heat and electric
20 resistance heating, in favor of heat pumps without a set-
21 back thermostat.

22 MR. VERMEULEN: Maybe I would like to ask you
23 a question. If you had a choice between a heat --

24 CHAIRMAN SCHWEICKART: No, I'm sorry. I'm asking
25 the questions.

1 MR. VERMEULEN: If you had a choice between heat
2 pumps and resistant heat, what -- which one would you
3 choose?

4 CHAIRMAN SCHWEICKART: There's no question. I'd
5 choose a heat pump with a setback thermostat. I would,
6 number one, comply with the law, and --

7 MR. VERMEULEN: Well, okay. Now, let me throw
8 in another issue that I brought up this morning, and that
9 is the warranty problem. If, for example, we do comply
10 with the law, and we do put a setback device, forgetting
11 about the availability, forgetting about the cost, the
12 warranty issue, and the heat pump, the compressor goes out,
13 as many of these manufacturers have alluded to. You know,
14 that's not something I'm making up. Who is liable? Maybe
15 that should be addressed.

16 MR. GAUGER: I think all the manufacturers have
17 indicated that they recommend and would recommend specific
18 models to be used with theirs, and that's no different
19 situation than you have with the current situation.

20 MR. VERMEULEN: I think that they said that they
21 wanted to test them, for example --

22 CHAIRMAN SCHWEICKART: Mr. Vermeulen, I see no
23 difference there, and any other device from a -- a radial
24 tire I may buy for my car, or a microphone that the
25 Commission may buy for our hearings, or whatever, if a

1 product fails that is warranted, the warrantor, depend-
2 ing on the terms of the warrantee, may or may not have an
3 obligation, and I would presume that there will be in the
4 marketplace here a number of different models. Some heat
5 pump manufacturers will be very reluctant to -- to warranty
6 setback thermostats until they have done testing and feel
7 confident, and then include that in their warranty.

8 Others will, in their fervor for selling heat
9 pumps in these areas, will -- will put on heat pumps --
10 or builders will put on setback thermostats that are not
11 warranted, and consumers will suffer.

12 Again, this is fundamentally no different, nor
13 is it the issue here before us. The issue here is you're
14 recommending that we take an action which would essen-
15 tially violate the energy requirements of the prescriptive
16 packages, in order to allow marketing of heat pumps in
17 these areas prior to the time at which they are mandated
18 to have setback thermostats.

19 Now, what we're doing here in my view is provid-
20 ing an additional opportunity for heat pump manufacturers
21 that when they do feel that there is a setback thermostat
22 for their heat pump, which is acceptable, that they have
23 the opportunity to market it in these additional areas,
24 rather than having to wait until 1984, so this is, if you
25 will pardon me, the regulator getting off industry's back.

1 COMMISSIONER EDSON: Well, let me make one other
2 comment, and that is that the issue that we have in choos-
3 ing between our Option 1 and our Option 2 this morning was
4 whether or not we were going to give the manufacturers the
5 flexibility to do the testing and design work so that they
6 could incorporate the kind of setback thermostat that they
7 thought was compatible with their system and would retain
8 their warranty, and we did that, which I think is the best
9 that we could do under the circumstances.

10 MR. VERMEULEN: I understand you're under a time
11 constraint here, but I just do want to raise the issue
12 that, you know, in the concern about the ratepayers and
13 the revolts that everybody is claiming, I -- I said this
14 before, that I feel it's a travesty that, if it was a dif-
15 ference -- and it gets down to cost, in terms of a builder.
16 You know, if he -- if it's cheaper -- whatever is the
17 cheaper way out, he's going to go with it, and clearly, if
18 the resistant heating package is the cheaper of the two,
19 that poor ratepayer is the one that's going to be stuck
20 with that problem until the availability of them comes to
21 a point where they are cost-effective and cost-competitive
22 to the resistant heat.

23 And that's the issue that I'm bringing up here.

24 COMMISSIONER GANDARA: Mr. Chairman --

25 CHAIRMAN SCHWEICKART: Yes. Commissioner Gandara.

1 No, I -- what I -- let me say my intent. My
2 intent here is I think we're very close to the end of this
3 process. What I'd like to do is finish this item. I
4 think if Commissioner Commons has another question that may
5 be the end of it.

6 At that point, I want to announce a break so that
7 we can get our cars out of the garage so they're not locked
8 in overnight.

9 COMMISSIONER GANDARA: Mr. Chairman, I'm going
10 to have to leave. I'm not coming back after a break, so
11 I'd like to leave a motion, and then leave it on the table.
12 I -- you know, I'm really six hours overdue, and I'm sorry,
13 but I -- you know, I can't -- we've heard most of the
14 issues. I'd like to leave a motion with the recommended
15 changes, and then the Commission can proceed as-- as it
16 wishes.

17 COMMISSIONER COMMONS: I have no objection,
18 since after there's a motion we can continue the discus-
19 sion. I think we should defer to the Presiding Member to
20 allow him to do so.

21 CHAIRMAN SCHWEICKART: Well, I would point out,
22 from a practical standpoint, that without Commissioner
23 Gandara's vote we have essentially a zero chance of moving
24 anything today.

25 COMMISSIONER GANDARA: I'm suggesting that we end

1 it in two minutes.

2 CHAIRMAN SCHWEICKART: Well, that's fine with me,
3 but Commissioner Commons has the option of raising any
4 questions he may wish.

5 COMMISSIONER COMMONS: I do not think it's pos-
6 sible -- you know, I defer to your motion, but I don't
7 defer to the closing of debate or discussion.

8 MR. STEEL: I would like to hear the motion before
9 I go home.

10 COMMISSIONER COMMONS: Well, I --

11 CHAIRMAN SCHWEICKART: We'll take that into con-
12 sideration, Mr. Steel. Thank you.

13 COMMISSIONER COMMONS: I have no objection of
14 giving up the floor to the making of the motion if we can
15 continue the discussion. Otherwise, I would like to proceed
16 with the discussion.

17 COMMISSIONER GANDARA: Can I make my motion?

18 CHAIRMAN SCHWEICKART: Fine. The floor is always
19 open to a motion.

20 COMMISSIONER GANDARA: Okay. Mr. Chairman, I --

21 COMMISSIONER COMMONS: Excuse me one second. I
22 don't want to get caught here.

23 I'm giving up the floor on the basis of allowing
24 a motion, so long as I can proceed with the discussion.
25 Is that understood?

1 COMMISSIONER GANDARA: I don't --

2 CHAIRMAN SCHWEICKART: There will alw4ys be dis-
3 cussion of a motion prior to a vote.

4 COMMISSIONER COMMONS: All right.

5 COMMISSIONER GANDARA: Mr. Chairman, I've been
6 keeping track here of the interim concensus that we've
7 gone through point by point. I'd like to move that the
8 Committee's recommendations by adopted with the following
9 exceptions.

10 One, in Section 2-5301(a) (2), Mr. Ruby has sug-
11 gested a grammatical correction, "have" should replace
12 "has" in the E. section.

13 With respect to 2-5351(c) (1), that we delete the
14 entire underlined portion that had to do with solar access.

15 With respect to Section 2-5351(c) (3), although
16 I disagree with the sense of the Commission, it appears
17 the sense of the Commission is to omit the last underlined
18 sentence starting with "internal shades" and ending with
19 "device."

20 With respect to Section 2-5351(c) (7), to delete
21 the entire second paragraph.

22 With respect to Section 2-5352(c), to adopt, as
23 recommended here. However, I did include some language
24 that would substitute for the last sentence, which is as
25 follows. "...including foundation walls of heated basements

1 or heated crawl spaces," to be substituted after "walls"
2 and before "shall" in the first sentence, and that in view
3 of the 45-day notice and agreement by everybody here that
4 it would be a substantive change, that we indicate our
5 receptiveness at the Building Standards Commission of such
6 a change being proposed there, but at the moment, to avoid
7 that 45-day notice, that we proceed to adopt 2-53521(c) as
8 currently stated.

9 And then finally, with respect to Table 2-53R,
10 to -- in the footnotes, to change the "by" to "to" 1.15,
11 Footnote 2; 1.10, Footnote 3; and 1.05, Footnote 4.

12 Those are all the changes that I have sensed the
13 Commission wished to make.

14 CHAIRMAN SCHWEICKART: All right. The Commission
15 has before it a motion, and by the leave of the Commission,
16 I would recommend that we permit Commissioner Gandara to
17 vote at this time prior to discussion.

18 What's the sense of the Commission? Commissioner
19 Edson?

20 COMMISSIONER EDSON: That's fine.

21 CHAIRMAN SCHWEICKART: Commissioner Commons?

22 COMMISSIONER COMMONS: I'd like legal counsel's
23 opinion. If there's going to be amendments to a motion,
24 can a Commissioner vote when he is not here?

25 MR. CHAMBERLAIN: I'm sorry, but I don't believe

1 so.

2 CHAIRMAN SCHWEICKART: Let me -- let me make
3 another recommendation. If Commissioner Gandara would with-
4 draw his motion, I will -- I will make an identical motion,
5 I'll place an identical motion on the floor, and again, by
6 the Commission's leave, permit Commissioner Gandara to
7 vote on that motion.

8 I would then -- or for that matter, Commissioner
9 Edson, the second member of the Committee, could make such
10 a motion, to make it within the Committee, in which case
11 we would have the moving party present for the -- any dis-
12 cussion and consideration of amendments.

13 MR. CHAMBERLAIN: I don't think that makes any
14 difference. The point is that it's possible -- what you're
15 proposing is that Commissioner Gandara vote on something
16 in advance that you then have discussion of possible alter-
17 natives or amendments.

18 If you should come up with anything different,
19 then his vote wouldn't have counted.

20 COMMISSIONER COMMONS: Let me ask you a question.

21 COMMISSIONER GANDARA: Mr. Chamberlain, can't --
22 can't I vote?

23 CHAIRMAN SCHWEICKART: No.

24 COMMISSIONER GANDARA: Can't I just vote, and
25 everybody else abstain? Can't we call the question, let's

1 have a vote, everybody else abstains because they wish to
2 discuss it further, and then after everybody discusses it
3 they can change their abstention to a vote one way or the
4 other?

5 COMMISSIONER COMMONS: Well, I will solve your
6 problem for you, Commissioner. I will vote on this matter.
7 I will make a concurring opinion of my own. I will vote
8 the way you have written the opinion so that we do not hold
9 up the world due to the personal situation that you have,
10 so you will have three votes.

11 I will state a concurring opinion, and I will
12 make the amendments that --

13 CHAIRMAN SCHWEICKART: All right. Are we ready
14 for the question then?

15 COMMISSIONER COMMONS: No, because I have dis-
16 cussion which will occur after the time we come back. I'm
17 just going to give the courtesy of voting to Commissioner
18 Gandara, as he would -- he has so instructed.

19 CHAIRMAN SCHWEICKART: Well, nevertheless, we --
20 Commissioner Gandara will no longer be here to vote on the
21 motion --

22 COMMISSIONER COMMONS: Yes, we will have --

23 CHAIRMAN SCHWEICKART: -- unless we vote at this
24 time.

25 COMMISSIONER COMMONS: You will have three votes,

1 because I will vote the way he has indicated. I'm not going
2 to vote the way I would normally vote on the matter. What
3 I'm saying is I will give him the courtesy of voting the
4 way he would have voted if he could have been here. He has
5 a personal situation and I'll respect that, so you'll have
6 the three votes.

7 I do want to have the discussion, because I do
8 have amendments that I want to bring up, but you will have
9 your three votes.

10 COMMISSIONER GANDARA: Why don't we break and get
11 the cars, and I'll come back. That's fine.

12 CHAIRMAN SCHWEICKART: All right. The Commission
13 meeting will break at this time, and we'll resume as soon
14 as we can get out of the garage.

15 (Short recess.)

16 CHAIRMAN SCHWEICKART: Let's resume again.

17 We have a motion before us. Is there any dis-
18 cussion?

19 COMMISSIONER COMMONS: Yes. As we had agreed
20 previously, I gave up the floor only for the purpose of
21 the making of the motion, and I'd like to go back to the
22 point where we were for a discussion on that item, and then
23 I have discussion on one other item, and then I'd like to
24 discuss some amendments in the motion as a whole.

25 I'd like to ask staff, the testimony we had today

1 on the automatic thermostat was that it could be made
2 available to manufacturers in small quantities at an
3 approximate price of \$200. To an end user on a retrofit
4 we were told that the price has been reduced from \$585 to
5 \$485.

6 The proposal we have before us is very similar
7 to the issue in the furnace situation which this Commission
8 adopted three to one, and here we have I think a situation,
9 although it's only for a 15-month period, of the question
10 of cost-effectiveness of the proposal as currently written.

11 Given the \$200, what I would like to know is what
12 are the benefits that are going to accrue from the using
13 of the automatic thermostat during this period of 15 months,
14 and what is the payback period, and are we actually propos-
15 ing something for this interim period that is cost-
16 effective.

17 And, of course, if staff disagrees with the num-
18 ber that was presented of \$200 from the manufacturer and
19 thinks the figure should be \$485, or some other figure,
20 I'd like to also have that indicated.

21 CHAIRMAN SCHWEICKART: Excuse me. As a matter
22 of procedure here, we had a number of people who are being
23 held over. I'd like the sense of the Commission on whether
24 or not it is the desire of the Commission to take up any
25 further items following the disposal of Item 5, or whether

1 we should continue the business meeting to tomorrow, or
2 the earliest possible time, to finish the agenda.

3 Commissioner Gandara, I assume that you're headed
4 for home.

5 COMMISSIONER GANDARA: Yes. After this item I'm
6 heading for home, and I can't tell you when I'll be back.

7 CHAIRMAN SCHWEICKART: All right. Commissioner
8 Edson?

9 COMMISSIONER EDSON: Perhaps you could help me
10 by telling me what the remaining issues are.

11 CHAIRMAN SCHWEICKART: Well, we have --

12 COMMISSIONER EDSON: Aside from the approval of
13 the minutes, the Executive Director's Report, and General
14 Counsel's Report.

15 CHAIRMAN SCHWEICKART: We have policy committee
16 reports in which I will be -- I have been holding the staff
17 to present two items to the Commission for their considera-
18 tion for any comments of the Commission before authorizing
19 staff response to a couple of items, one dealing with a
20 New Melones hearing on the State Water Resources control
21 Board, and the other responding to Secretary Duffy's
22 request for comments pursuant to the Exxon development and
23 production plan in the Santa Barbara Channel.

24 COMMISSIONER EDSON: Is there a reason that it
25 has to be handled in a business meeting?

1 CHAIRMAN SCHWEICKART: The only way the Commission
2 can -- can advise on this -- well, no, legally there is no --
3 there is no requirement that it be handled in the business
4 meeting. In fact, it is clearly within the -- within the
5 Chairman's authority to direct the staff, in keeping with
6 the policy of the Commission, to provide this information.
7 However, it was my intention to inform the Commission and
8 take any comments of the Commission under advisement.

9 Nevertheless, legally, to answer your question,
10 no.

11 COMMISSIONER EDSON: My sense is, then, since we
12 will have a short Commission in any case, that we not take
13 up business meeting time to do that, and that if the
14 Commission is interested in briefings on the issue, obtain
15 those as soon as possible, and provide their comments to you.

16 CHAIRMAN SCHWEICKART: All right. So then I take
17 it you're recommending that we release the staff, but finish
18 the business meeting this evening.

19 CHAIRMAN SCHWEICKART: All right. Fine. Thank
20 you.

21 And I beg your pardon on the interruption, and
22 John, if you would release the staff, please.

23 COMMISSIONER COMMONS: Well, one second.

24 COMMISSIONER EDSON: You haven't heard from
25 Commissioner Commons.

1 COMMISSIONER COMMONS: You didn't hear from me,
2 sir.

3 COMMISSIONER EDSON: Yes.

4 CHAIRMAN SCHWEICKART: Okay. Commissioner
5 Commons.

6 COMMISSIONER COMMONS: I had one item on a
7 committee report to bring up which I made aware to you I
8 believe yesterday. I know your two items were there, but
9 I think I did mention it to you yesterday--

10 CHAIRMAN SCHWEICKART: Well, do you require staff?

11 COMMISSIONER COMMONS: I may.

12 The second is, I have an item -- I believe we
13 were called by the -- we were noticed that there would be
14 an Executive Session on a legal matter, and I have prepared
15 a document for that legal matter. I do not object if that
16 can be done at a time certain tomorrow. I will not be here
17 Friday.

18 I have a particular interest in the matter that
19 was brought before us, and I have prepared something for
20 that, and so in terms of the Executive Session, I do not
21 object if we hold that over to tomorrow, but I would object
22 if it was held over beyond tomorrow.

23 And we have been duly called for an Executive
24 Session. I don't know what the rule is in terms of having
25 a quorum on an Executive Session.

1 CHAIRMAN SCHWEICKART: Well, there must be one.
2 It's my feeling we can probably finish that this evening
3 as well.

4 MR. CHAMBERLAIN: I'm not sure which of the
5 attorneys involved are still here, but I could probably
6 present the issues myself.

7 The only -- there's only one issue in which we
8 absolutely have to take action before the next business
9 meeting, and that I would suggest that we either have to
10 do tonight or we have to do it at a time certain later.

11 COMMISSIONER COMMONS: All right. I'm not in
12 Sacramento Friday, Monday or Tuesday, and I would kindly
13 rearrange my calendar for a time tomorrow if that would be
14 in the convenience of the other Commissioners, but I think
15 the Executive Session is a matter that should be brought
16 up, and I believe we have the ability to hold this meeting
17 open, or the docket open, in order to do that.

18 CHAIRMAN SCHWEICKART: All right. But I don't
19 believe that there is a necessity to do that, since I
20 believe we would have a quorum this evening, and I would
21 suggest that we then proceed, and in terms of the staff
22 that was being held for my items, John, you may release the
23 staff.

24 I would recommend that we proceed with the meet-
25 ing where it was interrupted, and we can later judge,

1 depending upon the time, whether we will have a quorum for
2 finishing the meeting and the Executive Session.

3 Okay. I beg your pardon for the interruption,
4 but I wanted to handle other people.

5 COMMISSIONER COMMONS: I believe this is -- the
6 cost-effectiveness issue which had been raised on the fur-
7 naces was -- in that case it was the Presiding Member's
8 report that this was a selection of a testing procedure
9 and not a regulation, that cost-effectiveness was not rele-
10 vant at that time.

11 However, I believe in this case we have a clear
12 case of a regulation that we're discussing, and cost-
13 effectiveness is certainly a valid issue to raise and is
14 apropos on this particular item.

15 MR. GAUGER: Yes. I have here a presentation
16 that was made by Honeywell during the Committee hearings.
17 Their presentation -- actually their petition is what
18 initiated the whole process related to the setback ther-
19 mostats.

20 Their analysis -- well, let me tell you theirs,
21 and I'll tell you our position.

22 They used a \$226 cost, so it's very comparable
23 to the numbers we were talking about earlier today. Their
24 conclusion is that the typical payback in California is
25 2.4 years.

1 The staff reviewed that and made presentations
2 at the Committee hearing and I believe on January the 12th
3 when it was previously before the Commission, and discussed
4 the fact that some of the assumptions that were made by
5 Honeywell. For instance, they took a set-up savings due to
6 cooling, which typically the Commission has not taken in
7 its cost analysis, and when we adjusted the Honeywell num-
8 bers we came out with about a four-year payback.

9 COMMISSIONER COMMONS: Now, that would be a four-
10 year payback on an average in all of the districts that
11 we're discussing?

12 MR. GAUGER: Honeywell's -- Honeywell says 2.4
13 years on the average. They have a breakdown in Fresno.
14 They talked to 2.6. San Francisco, 2.3, Los Angeles, 2.
15 So those are the kinds of spreads you get across the state,
16 anywhere from two to close to three.

17 COMMISSIONER COMMONS: What is the typical energy
18 savings percentage from a setback thermostat on the heat
19 pumps versus none?

20 MR. STEEL: I can answer that. The --

21 CHAIRMAN SCHWEICKART: Mr. Steel. Excuse me.
22 Staff?

23 MR. GAUGER: Yeah. I'd like to quote right out
24 of the report here, and if you'll give me a second I think
25 I can come up with the percentages.

1 Yeah. They show 24 percent heating in Fresno,
2 six percent on the cooling load in Fresno. San Francisco,
3 they have 16 percent on the heating --

4 COMMISSIONER COMMONS: Excuse me, Staff.

5 Honeywell, if they were here, would present their
6 opinion. I'm asking staff's opinion, not Honeywell's
7 opinion.

8 MR. GAUGER: I don't have the precise numbers that
9 the staff presented, but we agreed on the energy calcula-
10 tions. It was whether or not you take cooling, and we had
11 some differences on the price of equipment.

12 For instance, their \$226 price for the thermostat
13 was the total price. A cost-effective analysis would
14 really look at the differential between a \$70 standard
15 thermostat and the 226, and those are the kinds of dif-
16 ferences.

17 But in the -- in the heat loads in the energy
18 savings we were consistent. We were within just a --

19 COMMISSIONER COMMONS: All right. You're saying
20 that the Honeywell percentages that they have presented in
21 testimony to the Commission are the same as staff's.

22 MR. GAUGER: Essentially.

23 COMMISSIONER COMMONS: As presented. All right.
24 Then what were those percentages again, please, using
25 Fresno?

1 MR. GAUGER: Fresno, the heating is 24 percent
2 saving, the cooling is six percent saving.

3 COMMISSIONER COMMONS: All right. If we take
4 that, what would that average out?

5 MR. GAUGER: Over the year?

6 COMMISSIONER COMMONS: Yeah. For the Fresno area.

7 MR. GAUGER: I don't know the --

8 COMMISSIONER COMMONS: I believe cooling we've
9 said dominates.

10 MR. GAUGER: I think we could prorate it -- hmm?

11 COMMISSIONER COMMONS: I think we said cooling
12 dominates.

13 I come -- if you say it's two to one on cooling,
14 I come to a 12 percent savings.

15 MR. HUSTON: That's about right.

16 COMMISSIONER COMMONS: All right. What is the
17 typical utility bill in Fresno?

18 COMMISSIONER EDSON: Can I interrupt with one
19 comment?

20 MR. GAUGER: We can take that out, yeah. That's --

21 COMMISSIONER EDSON: Frankly, I think when the
22 Commission adopted these standards, a very extensive cost-
23 effective analysis was done. These standards represent the
24 lowest life-cycle cost, and far exceed the cost-effectiveness
25 standard set in statute.

1 It is inconceivable -- this could -- this incre-
2 mental addition to the standard could in fact not be cost-
3 effective, and we would still be so far below that statu-
4 tory test that the question, it seems to me, is irrelevant.

5 MR. GAUGER: The differential savings is \$61.
6 I don't have before me the totals.

7 COMMISSIONER COMMONS: You're saying the differen-
8 tial savings is approximately \$61?

9 MR. STEEL: In the interim, I might say, from my
10 analysis, the present value of a heat pump thermostat is
11 about \$1600.

12 MR. HUSTON: Thank you, Jerry.

13 MR. STEEL: Through your present value analysis.

14 COMMISSIONER COMMONS: All right. If you say
15 that it's \$60, now, that would -- that's the Honeywell
16 number of 2.5 payback, so if we were not to adopt the
17 amendment we would not be doing something cost-ineffective.
18 That's the -- I just want to make sure that we are not
19 doing something that is not cost-effective.

20 MR. GAUGER: I think a major portion of the
21 Committee hearings and the January 12th hearing were
22 devoted to showing that in fact this is a cost-effective
23 thing to do.

24 COMMISSIONER COMMONS: Okay. That's -- that
25 would conclude my concern on that one particular amendment.

1 So long as it's cost-effective I'm willing to go along with
2 the Committee.

3 Now, I believe, Mr. Chairman, you said at the --
4 after we finished all the footnotes that we could have a
5 discussion on other items that affected the total package,
6 and that you wanted to hold those -- that discussion item
7 to the end.

8 CHAIRMAN SCHWEICKART: That's correct.

9 COMMISSIONER COMMONS: All right. Since I was
10 not a Commissioner initially when we adopted the building
11 standards, in a sense this is the first time I would be
12 voting on a building standards issue.

13 One of my concerns, as I hear the complexity,
14 and it took us some six hours to assess some I think rela-
15 tively minor amendments, is I'd like the staff's opinion
16 as to the effect of these amendments on the ability of a
17 small businessman or a small builder to remain viable in
18 the California economy and build homes.

19 MR. GAUGER: The effect of the amendments we've
20 discussed today is to make it easier for him to comply.
21 They are clarifications primarily, and in fact would make
22 it easier.

23 COMMISSIONER COMMONS: Is there anyone from
24 industry that would have a contrary opinion, that what we
25 are doing today is going to help the small builder rather

1 than hinder the small builder?

2 COMMISSIONER GANDARA: They're all home eating
3 dinner.

4 COMMISSIONER COMMONS: Well, I'm going to ask
5 the question. It's a very important one, with the com-
6 plexities that we've had presented.

7 All right. Then that was the -- oh, there was one
8 other item here.

9 What about -- I own my own lot, and I wanted to
10 build my own home. Is there any exemption process so I
11 can proceed? I happen to prefer a cooler home than the
12 standards -- than the standards permit. I own my own land,
13 and I'm going to hire my own builder --

14 CHAIRMAN SCHWEICKART: Excuse me. Point of clari-
15 fication. The standards do not in any way restrict your
16 ability to put your house at 32 degrees if you want.

17 COMMISSIONER COMMONS: Do I have the physical
18 capability of doing so? My understanding is that I'm
19 restricted on the size of air conditioner.

20 COMMISSIONER EDSON: But you're not restricted
21 on your thermostat setting.

22 CHAIRMAN SCHWEICKART: Whatever it's --

23 COMMISSIONER COMMONS: But if the size of my air
24 conditioner would not -- an air conditioning size dictates
25 the, based on the number of square feet, how many degrees

1 I can drop the heat in my -- in my room, or in my house.

2 MR. GAUGER: Obviously, there would be some point
3 at which you could not maintain the temperature, depending
4 on where you chose to set it. However, the standards
5 provide that, as a minimum, the thing has to be sized big
6 enough to provide -- maintain the temperature.

7 Now, if you set your thermostat lower -- for
8 instance it's designed to maintain it at 80 degrees. If
9 you were to set your thermostat at 70 degrees you would in
10 fact precool that building earlier in the day. It would
11 come on, maintain the 70 degrees. When you finally hit
12 that peak hour it might drift up a little if it were
13 improperly sized, but the standards provide for adequate
14 capacity to maintain a temperature below that.

15 COMMISSIONER COMMONS: Am I correct in under-
16 standing that in all of the standards what is held con-
17 stant is the amount of energy consumed?

18 MR. GAUGER: Per square foot.

19 COMMISSIONER COMMONS: Per square foot?

20 MR. GAUGER: Yes.

21 COMMISSIONER COMMONS: And so if I may wish to
22 increase the size of my air conditioner and it turned out,
23 in order to have a comfort level at 65, which would be my
24 preference, rather than 70, that I may have to use a cost-
25 ineffective approach because of the holding constant of

1 the energy coefficient per square foot?

2 MR. GAUGER: I'm sorry. Could you repeat that?
3 It didn't compute.

4 COMMISSIONER COMMONS: It's the same question we
5 discussed for an hour this morning, but now I want it on
6 the record.

7 MR. GAUGER: The -- the --

8 COMMISSIONER COMMONS: We have held --

9 MR. GAUGER: The question you --

10 COMMISSIONER COMMONS: We have made the driving
11 force on the amendments that we have considered today the
12 amount of energy consumed per square foot, rather than
13 taking into consideration, if I want a different comfort
14 level than you have prescribed for me, as to whether or not
15 I could increase the size of my air conditioning unit, and
16 that might be a more cost-efficient method than holding
17 constant the amount of energy that is consumed.

18 In all cases, I cannot consume more than the
19 amount of energy, that's the driving force --

20 MR. GAUGER: No, that's a design criteria. You
21 can use any amount of energy. It's designed to meet a
22 certain level. How you operate your building is not
23 regulated. The one who is regulated is --

24 COMMISSIONER COMMONS: Well, but the design --

25 MR. GAUGER: -- is the designer.

1 COMMISSIONER COMMONS: No, but the design of that
2 building is based on the amount of energy consumed per
3 square foot.

4 MR. GAUGER: That's correct.

5 COMMISSIONER COMMONS: It's designed on that basis.

6 MR. GAUGER: Operated under certain conditions.

7 COMMISSIONER COMMONS: Rather than designed if
8 I have a different comfort level, and I have my own piece
9 of land, and I want to construct to a different comfort
10 level than you have prescribed, I am not able to do so on
11 a cost-effective basis.

12 MR. GAUGER: You can live to a different comfort
13 level.

14 COMMISSIONER COMMONS: I have to always come back
15 to energy consumed per square foot.

16 COMMISSIONER EDSON: You can operate the house
17 any way you want. If you want to make it cooler, you can,
18 and in fact consume more than the design parameter says,
19 or if you think that the cooling system is under-sized in
20 order to meet your comfort needs, you can I believe increase
21 the size of the cooling system and make trade-offs in other
22 areas by using the point system or some other performance
23 approach.

24 MR. GAUGER: That's true.

25 COMMISSIONER COMMONS: However, my understanding

1 in discussion with staff is, if I wish to increase the size
2 of the air conditioner, I may not be allowed to do so in
3 a cost-effective manner, and I guess what I'd like to do --

4 MR. GAUGER: It would not be cost-effective for
5 you to do that.

6 COMMISSIONER COMMONS: What I'd like to do is
7 not take further time of the Commission today on that item,
8 but this would be another item I'd like to pass to the
9 Committee, which may be, even though it's involved in that
10 particular table, on the budget, it be one that the
11 Committee look at in their six-month package, and so I'd
12 like to submit that to the Committee.

13 At this time, unless there are other Commissioners
14 that had discussion on the overall motion, I'd like to make
15 my amendments.

16 CHAIRMAN SCHWEICKART: All right. Were there any
17 other items, Commissioner Gandara? At the back of your
18 Committee report there is a set of other issues. Was it
19 your desire to --

20 COMMISSIONER GANDARA: All the --

21 CHAIRMAN SCHWEICKART: -- either deal with those,
22 or discuss them, or whatever procedure you'd like --

23 COMMISSIONER GANDARA: All the issues -- all the
24 issues have been addressed, Mr. Chairman. The reference
25 to other issues is -- is really made reference to in the

1 fact that during these proceedings it always occurs there
2 are suggestions that are -- that are merit-worthy but do
3 not fall within the scope of the original Commission order,
4 and so that was just prefatory language by way of saying
5 that there were bound to be issues that the Committee did
6 not consider appropriate to take under this proceeding, but
7 we have covered -- we've gone through it sentence-by-
8 sentence, section-by-section, in discussion today. Every-
9 thing really has been covered.

10 CHAIRMAN SCHWEICKART: All right. Fine.

11 Commissioner Commons, you have some amendments?

12 COMMISSIONER COMMONS: Yes. Section 2-5302, I'd
13 like to move to amend to strike the words "is any," and
14 insert the words "shall be deemed to have begun when any,"
15 and then go on with the way it reads, "construction
16 activity," and then add the word "is" before the words
17 "undertaken in reliance."

18 CHAIRMAN SCHWEICKART: All right. Commissioner
19 Gandara, do you consider this a friendly amendment?

20 COMMISSIONER GANDARA: No.

21 CHAIRMAN SCHWEICKART: All right. Commissioner
22 Commons, do you propose that the Commission vote on your
23 amendment?

24 COMMISSIONER COMMONS: Yes, and when I vote I'd
25 like to state my opinion.

1 CHAIRMAN SCHWEICKART: All right. The motion is
2 on the floor to amend the main motion, pursuant to the
3 wording submitted by Commissioner Gandara -- I mean by
4 Commissioner Commons.

5 Is there any discussion?

6 Commissioner Commons, it's your turn.

7 COMMISSIONER COMMONS: Well, when I vote I'll give
8 my opinion.

9 CHAIRMAN SCHWEICKART: Well, presumably, you should
10 give your opinion to persuade those who are going to vote
11 on your amendment.

12 COMMISSIONER COMMONS: Well, I'll just -- when
13 I give my -- are you not allowed -- when you vote are you
14 only allowed to say yes, or no, or abstain, or are you
15 allowed to give a reason at that time?

16 CHAIRMAN SCHWEICKART: Commissioner Commons, what
17 would be the purpose, if you will, of not stating whatever
18 you may wish to have on the record at this time, prior to
19 the vote of the Commission on your amendment?

20 COMMISSIONER COMMONS: Well, sometimes you wish
21 to vote yes on something, and you have a difference or a
22 concurring opinion as distinct from just wanting to vote,
23 yes, you think the overall --

24 CHAIRMAN SCHWEICKART: Well, I think it's appro-
25 priate that you do that at this time. Normally there is

1 discussion on any motion prior to the vote on the motion.

2 COMMISSIONER COMMONS: May I, when I vote,
3 clarify my vote, Legal?

4 MR. CHAMBERLAIN: Well, technically, under
5 Robert's Rules, the vote is supposed to be yes or no, and
6 there is not supposed to be clarification. However, the
7 Commission needn't follow that -- that specific rule.

8 COMMISSIONER COMMONS: So I throw it in the hands
9 of the Chair.

10 CHAIRMAN SCHWEICKART: The Chair rules that if
11 you have anything to state at all concerning your vote on
12 this motion that you have every opportunity at this moment
13 to do so, but once the question is called on the vote, the
14 vote will be yes or no, and we'll move on.

15 COMMISSIONER COMMONS: All right. The reason I
16 would like to propose this motion is that we are creating
17 a definition of actual site preparation and construction
18 that does not -- that is an aberration, does not exist in
19 any locality, would have no understanding by anybody, and
20 that there is no reason in this instance to actually have
21 the definition of a term in this instance.

22 Rather, what we can do is we can establish a
23 trigger mechanism by stating actual site preparation and
24 construction initiates at a particular point in time.

25 CHAIRMAN SCHWEICKART: Any further discussion?

1 We'll call the vote.

2 MS. OXLEY: Commissioner Gandara?

3 COMMISSIONER GANDARA: No.

4 MS. OXLEY: Commissioner Edson?

5 COMMISSIONER EDSON: No.

6 MS. OXLEY: Commissioner Commons?

7 COMMISSIONER COMMONS: Yes.

8 MS. OXLEY: Chairman Schweickart?

9 CHAIRMAN SCHWEICKART: No.

10 COMMISSIONER COMMONS: All right. The second
11 amendment I'd like to make is to, on Section 1409(d), is
12 to eliminate all of the words following 2-5351(a).

13 CHAIRMAN SCHWEICKART: All right. Do you con-
14 sider this a friendly motion, Commissioner Gandara?

15 COMMISSIONER GANDARA: No.

16 CHAIRMAN SCHWEICKART: All right. Do you want
17 this brought before the full Commission, Commissioner
18 Commons?

19 COMMISSIONER COMMONS: Yes.

20 CHAIRMAN SCHWEICKART: All right. We have a motion
21 before us to strike, in 1409(d), all language after
22 2-5351(a). Is there discussion?

23 COMMISSIONER COMMONS: Yes. I feel that the way
24 the language reads here is, one, vague. Second, it dis-
25 courages the -- it discourages the development of packages,

1 and that it would be preferable to leave it within the
2 Commission's hands as to the way the language reads up to
3 that point.

4 CHAIRMAN SCHWEICKART: Any further discussion?

5 All right. We'll call the roll.

6 MS. OXLEY: Commissioner Gandara?

7 COMMISSIONER GANDARA: No.

8 MS. OXLEY: Commissioner Edson?

9 COMMISSIONER EDSON: No.

10 MS. OXLEY: Commissioner Commons?

11 COMMISSIONER COMMONS: Yes.

12 MS. OXLEY: Chairman Schweickart?

13 CHAIRMAN SCHWEICKART: No.

14 COMMISSIONER COMMONS: All right. My last amend-
15 ment would be to, on that same section, would be to eli-
16 minate the words "significant percentage" and insert
17 instead the words "and is likely to apply to a reasonable
18 number of new residential buildings."

19 CHAIRMAN SCHWEICKART: All right. Commissioner
20 Gandara?

21 COMMISSIONER GANDARA: Are these all the proposed
22 changes in 1409(d)?

23 COMMISSIONER COMMONS: Yes.

24 COMMISSIONER GANDARA: I don't consider it a
25 friendly amendment.

1 CHAIRMAN SCHWEICKART: Okay. Do you want to
2 bring it before the Commission for a full vote, Commissioner
3 Commons?

4 COMMISSIONER COMMONS: Yes.

5 CHAIRMAN SCHWEICKART: All right. Is there any --
6 we have a motion before us. Is there any discussion?

7 COMMISSIONER COMMONS: No.

8 CHAIRMAN SCHWEICKART: All right. We'll call the
9 vote.

10 MS. OXLEY: Commissioner Gandara?

11 COMMISSIONER GANDARA: No.

12 MS. OXLEY: Commissioner Edson?

13 COMMISSIONER EDSON: No.

14 MS. OXLEY: Commissioner Commons?

15 COMMISSIONER COMMONS: Yes.

16 MS. OXLEY: Chairman Schweickart?

17 CHAIRMAN SCHWEICKART: No.

18 Are there any further amendments?

19 MR. HUSTON: Commissioner, if I may interrupt --

20 CHAIRMAN SCHWEICKART: Yes.

21 MR. HUSTON: An amendment proposed by Commissioner
22 Gandara a moment ago on Table 2-53R is not mathematically
23 correct from what the staff had intended originally. During
24 the car-moving break, we had -- we have developed an equa-
25 tion that is mathematically correct, and I would suggest

1 that be included into Footnotes 2, 3 and 4, rather than
2 the amendment that Commissioner Gandara had proposed
3 earlier. I can bring that up for you to look at. It's a
4 bit complex to read over the -- over the microphone.

5 COMMISSIONER GANDARA: Give us the nature of the
6 change.

7 MR. HUSTON: Instead of the words "increase to
8 1.15 times the equation," it becomes "multiplied by 1, plus
9 0.15," and then the equation.

10 MR. RATLIFF: One plus or one point?

11 MR. HUSTON: It's 1, plus a quantity, 0.15, and
12 then the equation with the factors of RN --

13 MR. GAUGER: What was originally proposed would
14 make the budget smaller instead of bigger.

15 MR. HUSTON: Yes.

16 CHAIRMAN SCHWEICKART: Yes.

17 COMMISSIONER COMMONS: That's correct.

18 COMMISSIONER GANDARA: Okay. The question that
19 I have, you say may be multiplied. It's not the same as
20 saying that you can increase the budget.

21 COMMISSIONER COMMONS: Well, you can say "may be
22 increased by one plus .15."

23 MR. HUSTON: No. You don't want to --

24 CHAIRMAN SCHWEICKART: No, increase to one plus
25 what exists currently.

1 MR. HUSTON: You have to multiply by the value
2 in the budget table, though, at some point. You don't
3 increase it to the value you get from that equation. You
4 get that value from the equation --

5 CHAIRMAN SCHWEICKART: I see. Yes.

6 MR. HUSTON: -- and then multiply it by the value
7 in the table.

8 CHAIRMAN SCHWEICKART: Increase by. You're
9 correct.

10 MR. HUSTON: Yes. So I can present that to the
11 Commission for their consideration.

12 COMMISSIONER GANDARA: Okay. I don't have any
13 problem with that. The problem that I have is -- is it's
14 not clear that you're saying that the heating and cooling
15 budgets may be increased. You're saying the heating and
16 cooling budgets may be multiplied.

17 CHAIRMAN SCHWEICKART: Right.

18 COMMISSIONER GANDARA: Okay. May be multiplied
19 for the purpose of increasing, is what you mean to say,
20 now. I --

21 MR. GAUGER: Increased by multiplying by.

22 MR. STEEL: Yes. It may increased by multiplying
23 by --

24 CHAIRMAN SCHWEICKART: One plus --

25 COMMISSIONER GANDARA: Okay.

1 CHAIRMAN SCHWEICKART: -- et cetera.

2 COMMISSIONER GANDARA: That's fine. I'll make
3 that the -- my motion and amendment.

4 CHAIRMAN SCHWEICKART: All right. Are there any
5 further amendments?

6 COMMISSIONER COMMONS: Before we vote, then, we'll
7 have overall discussion on the motion?

8 CHAIRMAN SCHWEICKART: If there are no further
9 amendments, discussion on the motion?

10 COMMISSIONER COMMONS: Well, I'm going to vote
11 in favor of the overall motion, with the exception of the
12 amendments which were defeated, which I would oppose.

13 CHAIRMAN SCHWEICKART: There will be one vote on
14 the motion as it is presented, and the choice of all
15 Commissioners is yes or no.

16 Is there any further discussion?

17 All right. The Commission has a motion before it
18 by Commissioner Gandara, amended by the mathematical cor-
19 rection suggested by the staff and Mr. Steel. If there is
20 no further discussion, I'll call the roll.

21 MS. OXLEY: Commissioner Gandara?

22 COMMISSIONER GANDARA: Aye.

23 MS. OXLEY: Commissioner Edson?

24 COMMISSIONER EDSON: Aye.

25 MS. OXLEY: Commissioner Commons?

1 COMMISSIONER COMMONS: Aye.

2 MS. OXLEY: Chairman Schweickart?

3 CHAIRMAN SCHWEICKART: Aye.

4 (Thereupon, the hearing before the California
5 Energy Resources Conservation and Development Commission
6 was concluded at 7:35 p.m.)

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REPORTER'S CERTIFICATE

I, AMBER WHITSETT, an electronic court reporter,
do hereby certify under penalty of perjury:

That I am a disinterested person herein; that the
foregoing hearing of the California Energy Resources
Conservation and Development Commission was reported by me,
Amber Whitsett, an electronic court reporter, and there-
after transcribed into typewriting.

I further certify that I am not of counsel or
attorney for any of the parties to said hearing, nor in
any way interested in the outcome of said hearing.

I have hereunto set my hand this 14th day of
February 1983.



AMBER WHITSETT