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M I N U T E S
SUBCOMMITTEE ON OUTDOOR LIGHTING STANDARDS
(PUBLIC WORKS AND TRANSPORTATION COMMITTEE)
Council of the County of Maui
Council Chamber
February 20, 2002

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1 CONVENE: 9:02 a.m.

2 PRESENT: Councilmember Michael J. Molina, Chair
 Councilmember Charmaine Tavares,
 3 Vice-Chair (In 9:03 a.m; Out 11:56 a.m)
 Lee Altenberg, Member (In 9:09 a.m.)
 4 Hannah Bernard, Member
 Richard Chong, Member
 5 Mike Maberry, Member
 Warren McCord, Member (In 9:04 a.m.)
 6

STAFF: Gary R. Saldana, Legislative Analyst
 7 Camille Sakamoto, Committee Secretary

8 ADMIN.: Lloyd Lee, Chief, Engineering Division,
 Department of Public Works and Waste
 9 Management
 Howard Hanzawa, Engineer, Land Use and
 10 Codes Division, Department of Public
 Works and Waste Management
 11 Greg Nakao, Electrical Inspection
 Supervisor, Department of Public Works
 12 and Waste Management
 Patrick Matsui, Planning and Development
 13 Chief, Department of Parks and
 Recreation
 14 Kalvin Kobayashi, Energy Specialist,
 Department of Management
 15 Gregory J. Garneau, Deputy Corporation
 Counsel, Department of the Corporation
 16 Counsel

17 OTHERS: Richard J. Wainscoat, Astronomer,
 University of Hawaii, Institute for
 18 Astronomy
 Steve Sutrov
 19 Phil Johnson, Wailea Community
 Association
 20 Donald Jensen
 Dexter Kumano
 21 Lynne Woods, President, Maui Chamber of
 Commerce
 22 Terryl Vencl, Executive Director, Maui
 Hotel Association
 23 Randy Nakama, Maui Electric Company, Ltd.
 Brian Ige, Dowling and Company
 24 Bill George, Renaissance Wailea Beach
 Resort
 25 Roy Figeroa
 Additional attendees (5)

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PRESS: ?

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CHAIR MOLINA: The Council's Subcommittee on
Outdoor Lighting Standards is now in session
for this date of February 20th, 2002.

Members in attendance, we have from the
Director -- from the Maui Ocean Center, we
have Hannah Bernard; from the Illuminating
Engineering Society of America, Mr. Rick
Chong; and from the University of Hawaii
Assistant Director of External Affairs and
Institute for Astronomy, Mr. Mike Maberry.
Excused is the Subcommittee Vice-Chair
Councilmember Charmaine Tavares; the
President of the Outdoor Circle Maui Branch,
Mr. Warren McCord; and Mr. Lee Altenberg, the
Assistant Professor of Information and
Computer Sciences of the University of
Hawaii.

From the Corporation Counsel's Office,
we have Mr. Greg Garneau; Council Staff Gary
Saldana, Legislative Analyst; and Committee
Secretary, Camille Sakamoto.

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1 ITEM NO. 1: OUTDOOR LIGHTING STANDARDS (MISC.)

2 CHAIR MOLINA: We'll first proceed with public
3 testimony, but prior to that I would like to
4 give all of you an overview of the items
5 we'll be discussing at today's meeting.

6 First of all, it's the Chair's intent
7 to go until twelve o'clock today and we
8 will -- after public testimony is concluded,
9 we'll receive a demonstration from Dexter
10 Kumano, who is with Phillips Lighting in
11 Oahu. Mr. Kumano will show a comparison
12 between various light types and low pressure
13 sodium. And then we'll be discussing
14 different options about viewing lighting in
15 the County of Hawaii. And finally, I'd like
16 to resume the review of the prioritized
17 sections of the draft bill commencing where
18 we left off last meeting with Section .070,
19 Lamp Standards.

20 And if there is no objection at this
21 time, I would like to proceed with public
22 testimony.

23 COMMITTEE MEMBERS: No objections.

24 CHAIR MOLINA: No objections, Members? Okay.

25 Thank you.

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1 The Chair would like to recognize the
2 Vice Chair of the Subcommittee, Charmaine
3 Tavares.

4 Okay. Those wishing to testify, please
5 make sure you come up to the secretary's desk
6 there and sign up, and your testimony will be
7 limited to three minutes. An additional
8 minute will be granted subject to the
9 discretion of the Committee Chair. If your
10 testimony is not completed, an additional
11 three minutes will be given to you after all
12 others have been heard. Testifiers are
13 requested to state their name for the record
14 and to indicate who they are representing.

15 And to minimize any disturbances during
16 the meeting, please turn off all pagers and
17 cellular phones or set them to the silent
18 mode.

19 So with that, we shall be our first
20 testifier this morning and he is Dr. Richard
21 Wainscoat of the University of Hawaii
22 Institute for Astronomy to be followed by
23 Steve Sutrov.

24 . . . BEGIN PUBLIC TESTIMONY . . .

25 MEMBER WAINSCOAT: My name is Richard Wainscoat.

1 I'm an astronomer at the University of
2 Hawaii.

3 Last week I asked one of my colleagues
4 to attempt to obtain a spectrum of the night
5 sky from Haleakala with the intention of
6 assessing with, with real measurements what
7 the, what the light pollution problems are.
8 The spectrograph is still too new. It is
9 still in its first new nights of testing and
10 so probably has been unsuccessful, but we
11 will continue to, to try.

12 Because that failed, I used the census
13 data and methodology in, in a document that
14 I've distributed to you to, to try to assess
15 the present light pollution level on
16 Haleakala.

17 And I found that the night sky on
18 Haleakala could be as much as 50 percent
19 brighter than the natural level; therefore
20 the light pollution above Haleakala is
21 extremely serious, as much as five times the
22 level that the International Astronomical
23 Union recommends. Therefore, astronomers are
24 hoping that this lighting ordinance can
25 achieve a substantial improvement in the

1 light pollution over, over Maui.

2 For example, if the (____) telescopes,
3 which have an aperture of ten meters, were
4 located on Haleakala, their effective
5 aperture would be only seven meters and they
6 would have been incapable of many of the
7 discoveries that they achieved in the last
8 decade. That's very sobering to me.

9 Studies of moving objects, especially
10 sensitive to light pollution, the AEOS
11 Telescope operated by the Air Force is used
12 to track small satellites and space debris.
13 That telescope -- Because these objects are
14 moving quickly, the telescope cannot stare at
15 them to overcome light pollution. Therefore
16 light pollution limits what that telescope
17 can do.

18 Over the next decade telescopes will be
19 constructed to find near earth objects,
20 objects that could impact the earth and cause
21 loss of life. One such object struck Siberia
22 in 1908 with an effective energy of 40
23 megatons. A much larger object struck the
24 earth 65 million years ago and caused mass
25 extinctions and I think thankfully got rid of

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1 the dinosaurs.

2 We would like to know where all these
3 objects are so that if one of them is going
4 to hit the earth, we can do something about
5 it in enough time like pushing it a little
6 bit and letting a long time accumulate in the
7 motion. So this telescope or these
8 telescopes could not go on Haleakala with the
9 present light pollution.

10 Some advantages of low pressure sodium
11 lighting are that it's the most efficient
12 lighting source known at present. Yellow
13 light or monochromatic light improves the
14 perception of contrast. It's easier to see
15 moving objects. The large physical size of
16 the lamps reduces glare, and the low
17 operating temperature allows better optical
18 systems -- easier, easier shielding and
19 cheaper shielding.

20 MR. SALDANA: Three minutes.

21 MEMBER WAINSCOAT: Could I have one more?

22 CHAIR MOLINA: Proceed.

23 MEMBER WAINSCOAT: Okay. I'd just like to conclude
24 with a comment that there is an International
25 Light Pollution conference in Chili March

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1 5th, 5 to 7. I will be attending that. I'd
2 be happy to report to this Subcommittee on
3 items relevant to Maui.

4 And I have a little homework for you
5 all. In the packet that I gave you, I've
6 provided a transmission grading. You'll be
7 able to use it to look at the spectral
8 distribution of the light from both lamps,
9 and I encourage you to just go and look at
10 street lights and let this disperse the light
11 and understand the color and how color works
12 if you don't understand already. This is a
13 very easy, simple tool. Thank you.

14 CHAIR MOLINA: Okay. Thank you, Dr. Wainscoat.
15 Committee Members, questions at this time?
16 Dr. Wainscoat, if you could have -- Hold off
17 for a moment there.

18 MEMBER WAINSCOAT: Sure.

19 CHAIR MOLINA: We have Subcommittee Member Maberry
20 to be followed by Committee Member Bernard.
21 Proceed, Mr. Maberry.

22 MEMBER MABERRY: Thank you, Mr. Chair.
23 You mentioned the AEOS Telescope
24 Facility. That facility was in excess of
25 \$110 million to construct. It's a 3.67 meter

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1 telescope. Would you care to guess based on
2 the data that you've accumulated what its
3 effective aperture would be under the current
4 estimated lighting pollution of Maui County?

5 MEMBER WAINSCOAT: It would be degraded to about
6 2.7 meters for studies of faint objects.

7 MEMBER MABERRY: Thank you.

8 CHAIR MOLINA: Studies of bright objects, it
9 doesn't make a difference.

10 MEMBER MABERRY: Thank you.

11 CHAIR MOLINA: Okay. Thank you, Mr. Maberry. Ms.
12 Bernard?

13 MEMBER BERNARD: Thank you. Point of
14 clarification. It sounds to me like you're
15 saying that at this point we don't have
16 enough telescopes constructed or in use to
17 necessarily detect asteroids or comets or
18 other debris that might strike the earth.
19 Actually, it sounds like you're saying that
20 the national security or even the security
21 and safety of life on the planet could be,
22 could be affected by light pollution right
23 now?

24 MEMBER WAINSCOAT: At present we don't have enough
25 tel -- Well, there are plans in the next

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1 decade to construct one or two or more
2 telescopes to produce an inventory of objects
3 that could strike the earth and they need to
4 go at a, at a very dark site. So with the
5 present level of, of light pollution on
6 Haleakala, it would be -- I don't think it
7 would be a choice to put it there. I think
8 if the light pollution level were improved on
9 Maui, then Haleakala would be a much better
10 choice.

11 MEMBER BERNARD: Okay.

12 CHAIR MOLINA: Thank you, Ms. Bernard.

13 Committee Members, any other questions
14 for our testifier today? Okay. Mr. George?

15 Well, at this time -- For the record,
16 Dr. Wainscoat is a resource personnel so if
17 resource people, if you'd like to hold off on
18 your questions until then. Okay?

19 And the Chair would like to recognize
20 the appearance of Committee Members Dr.
21 Altenberg and Mr. McCord.

22 So hearing no other questions at this
23 time for Dr. Wainscoat, we shall proceed with
24 the rest of our public testimony and then
25 when we get into our discussion phase, we can

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1 ask Dr. Wainscoat additional questions.

2 Okay. Thank you.

3 Next to testify we have Steve Sutrov to
4 be followed by Mr. Phil Johnson.

5 MR. SUTROV: Good morning. My name is Steve
6 Sutrov. I'm here just testifying basically
7 for myself but I am also on the board of
8 directors for the Kula Community Association
9 for a number of years.

10 I'd like to take this opportunity to,
11 to say a few words on -- I have been getting
12 some calls from a couple other associations
13 wondering if -- whether or not they should be
14 coming down and testifying at these meetings
15 in regards to their concerns about this
16 issue.

17 And in talking with these people, they,
18 it seems like there's no real recommendations
19 that could be looked at right now from this
20 committee that have been agreed upon that
21 anyone can discuss outside of this room, and
22 so I'd like to recommend that we start this
23 committee, if possible can start putting
24 forth actual consensus of recommendations
25 rather than just ideas and concerns that

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1 pamper to maybe their own special interests.

2 I'd like to see that get fine-tuned a
3 little bit. I think the process would move
4 faster that way also. Instead of giving a
5 ten inch book to Council on Public Works when
6 it goes to them in hopefully a few months,
7 they'll have more detail as far as what is
8 being agreed upon as far as what is being
9 discussed here.

10 And so the other community
11 associations, I think they're going to wait
12 before they comment on what, what's been --
13 what is happening here to see what the actual
14 recommendations going forth are.

15 Personally, I have on some of the
16 recommendations that have been put forth,
17 just briefly I'll just pick a couple of them,
18 when we're talking about security lighting
19 and exempting, there have been
20 recommendations to exempt a lot of the
21 security lighting from any parts of the
22 ordinance.

23 When you talk about that, you're
24 talking about eliminating a lot of the
25 potential problem -- I mean you're adding to

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1 the potential problem because almost anything
2 can be considered security lighting in
3 certain instances. And to say it doesn't
4 have to be shielded or under the
5 recommendation just because it's on a 30
6 minute phase of going on and then going off,
7 it can only be a minute in between that 30
8 minute phase and another car goes by or, or
9 somebody else walks by it, and it goes on for
10 another 30 minutes and you're talking about a
11 very polluting fixture. And this is a very
12 common occurrence in neighborhoods and in
13 other business areas.

14 And so I think what you have to do is
15 you'd have to talk about exempting or people
16 going in for a variance if they have a
17 situation in which they think that they need
18 to be relieved of a potential liability or a
19 problem.

20 You need -- You can't wash away the
21 real strong points of this draft by mandating
22 full cut-off fixtures in almost every
23 instance. It's one of the strongest points
24 and one of the most, one of the things that
25 has to be kept intact with this draft. And

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1 if there are going to be exceptions to that,
2 exceptions can be granted on a case by case
3 basis if there's proven need for it.

4 But as far as full cutoff fixtures for
5 security lighting, there is no reason why you
6 can't, you can't mandate that. And if they
7 can't comply with that for safety and
8 security reasons, they can ask for an
9 exemption on that. So basically that's all
10 I've got right now.

11 CHAIR MOLINA: Okay. Thank you, Mr. Sutrov.

12 MR. SUTROV: Thank you very much.

13 CHAIR MOLINA: Committee Members, any questions for
14 Mr. Sutrov at this time? Hearing none, thank
15 you.

16 MEMBER BERNARD: I have one.

17 CHAIR MOLINA: Oh, I'm sorry. Go ahead. Ms.
18 Bernard, proceed.

19 MEMBER BERNARD: Could you possibly direct me to
20 that particular section that you're referring
21 to with the cutoff; is that, is that the
22 existing light fixtures section?

23 MR. SUTROV: On security lighting --

24 MEMBER BERNARD: Yeah, which --

25 MR. SUTROV: Well, I got the suggestion from I

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1 think from Mr. Chong's recommendations that
2 was given to the Committee here. In more
3 than one area he recommends that security
4 lighting be exempt. He wants to add the
5 following security lighting: All security
6 lighting which is activated by a motion
7 sensor and limited to operation continuously
8 for a maximum of 30 minutes shall be exempt
9 from the requirements of this ordinance. And
10 that's -- in one area he recommends that.

11 And in another area, it says luminaires
12 that have an output of 1,000 lumens directed
13 up onto the ocean to the highest tide
14 elevation shall be exempt from security
15 lighting.

16 But in a, in a few, in a couple areas
17 here, motion activated lighting may be
18 unshielded provided it is aimed in such a
19 manner as to prevent direct glare and
20 lighting into properties of others or into a
21 public right-of-way, and provided the light
22 is set to only go on when activated and to go
23 off within 30 minutes after the activity has
24 ceased.

25 It just seems like it leaves it open

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1 there to a light being on almost continuously
2 but it goes off for a minute in between and
3 it's -- And he said it can be unshielded
4 under those situations and I think that's
5 ridiculous.

6 MEMBER BERNARD: Thank you.

7 CHAIR MOLINA: Okay. Thank you. Mr. Maberry? Mr.
8 Sutrov, hang on a second.

9 MEMBER MABERRY: Actually a point of clarification,
10 Mr. Chairman, because Mr. Sutrov has brought
11 up a point that was, I was questioned about
12 by some members of the public who have
13 watched these proceedings, but point of
14 clarification: To date, although we have
15 received recommendations from resource people
16 and as well as other Committee Members, to
17 date we actually haven't accepted any changes
18 to the existing document; is that correct,
19 sir?

20 CHAIR MOLINA: Right. At this point we're just
21 hearing recommendations but nothing's been
22 formally established at this point.

23 MEMBER MABERRY: Thank you very much, Mr. Chair.

24 CHAIR MOLINA: Okay. Thank you.

25 Okay. Last to testify today -- By the

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1 way, if there is in anyone else in the
2 gallery that would like to testify, now is
3 the time for you to come up and sign up at
4 the secretary's desk.

5 We have from the Wailea Community
6 Association to testify now, Mr. Phil Johnson.

7 MR. JOHNSON: Mr. Chair, Members of the Committee,
8 I'm Phil Johnson from the Wailea Community
9 Association.

10 At our last meeting Dr. Altenberg
11 raised a question about the Daytona, Florida
12 ordinances which I, I understand a lot of
13 this proposed ordinance is based on, and so
14 it spurred me to do some research part of
15 which is on turtles.

16 I, first of all, want to say that I'm
17 not a turtle expert. I majored in
18 architecture and not biology, but there is a
19 tremendous amount of information that the
20 University of Florida and the State of
21 Florida have done on turtles. And a lot of
22 that has to do with their nesting habits and
23 it's all very well documented as to where
24 they nest and how they nest and when they
25 nest and all of that.

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1 And a lot of that science is accessible
2 and I pulled up a 20 page document just on
3 hawksbill turtles from that.

4 One of the things that I had trouble
5 dealing with is that there seems to be a lack
6 of science on the turtle population or at
7 least the accessibility of that information
8 in, in Hawaii, particularly in Maui.

9 It's my understanding that the, the
10 turtles that we are talking about are
11 hawksbills, that they're the only turtles
12 that do nest on Maui. All the other turtles
13 nest in the French Frigate Shoals. That's
14 not correct?

15 MEMBER BERNARD: No.

16 MR. JOHNSON: No. Okay. So again I don't know
17 that and I, and one of my concerns is that
18 there seems to be a lot of science that needs
19 to be documented science, that needs to be
20 done as to where the nesting sites are, what
21 these -- when these turtles are here, how
22 many turtles do we have nesting. There's a
23 lot of anecdotal information out there but I
24 don't, I haven't been able to find the
25 science on it.

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1 So my concern is that before we blacken
2 all of the beaches on Maui County is that we
3 maybe take care of the areas that we know
4 are, are nesting sites and protect those
5 nesting sites and then see if by expanding
6 those nesting sites that it would actually
7 help the turtles.

8 Also part of my research shows that
9 there isn't any Federal mandate that I know
10 of that says that we are required to expand
11 the nesting sites of the turtles and to give
12 them a, a larger habitat than they have right
13 now.

14 I think both myself personally and
15 everyone in this room would like to establish
16 and protect the nesting sites of the turtles
17 that we have now. I don't think there's any
18 argument there, but I think giving them the
19 entire coastline of Maui as potential nesting
20 sites is questionable science in my mind.

21 Thank you.

22 CHAIR MOLINA: Thank you, Mr. Johnson. Committee
23 Members questions? Ms. Bernard?

24 MEMBER BERNARD: This is not a question but I would
25 happy to discuss the science of sea turtles

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1 in Hawaii at some point.

2 CHAIR MOLINA: Okay. The Chair will make note of
3 that. Any other questions for the testifier?
4 Seeing none, thank you, Mr. Johnson.

5 Okay. At this point the Chair has seen
6 no one else is interested in interesting
7 today so effective at 9:20 the Chair will
8 close public testimony on our outdoor
9 lighting item.

10 . . . END OF PUBLIC TESTIMONY . . .

11 CHAIR MOLINA: Okay. Members, at the last
12 Subcommittee meeting the Members, all of us,
13 requested that some form of demonstration be
14 provided that will hopefully draw a
15 comparison between low pressure sodium and
16 high pressure sodium, mercury vapor and metal
17 halide. And today we have Dexter Kumano,
18 who's with Phillips Lighting from Oahu who
19 has graciously volunteered to provide you, to
20 provide us today with this information and
21 doing a demonstration.

22 So Mr. Kumano, before you start your
23 demonstration, I would like to remind the
24 Members that should you have questions during
25 the demonstration, please identify yourself

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1 and speak into the microphone.

2 So do we need to dim the lights a
3 little bit? I think we shall go ahead and do
4 that at this point.

5 So Mr. Kumano, if you'd like to go
6 ahead and, oops, sorry, take the stage and
7 begin.

8 MR. KUMANO: Okay. What I have here is a
9 demonstration kit that enables you to view
10 the difference between different light
11 sources side by side.

12 So in, in this case what we're doing is
13 comparing the low pressure sodium lamps,
14 which you are considering in putting in,
15 against the high pressure sodium lamps which
16 you currently have in street lighting and
17 outdoor security lighting and, and things of
18 that nature.

19 As you can see, the biggest difference
20 between the two light sources is the color --

21 CHAIR MOLINA: Excuse me, Mr. Kumano. My apologies
22 for interrupting for a moment. Resource
23 personnel, if you'd like to get a better
24 view, you're welcome to take a seat in the
25 gallery at this time.

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1 Okay. Thank you, Mr. Kumano. You can
2 proceed.

3 MR. KUMANO: As I was saying, the most obvious
4 difference between the two light sources is
5 the color of the light with the typical high
6 pressure sodium lamps that you see presently
7 used in street lighting, it's kind of a
8 peachy pink color. It's not, not terribly
9 unpleasant to look at compared to the low
10 pressure sodium which is a monochromatic
11 light which just shows the light in one, one
12 spectrum which is the yellow color. And I
13 believe that's what the observatories can
14 filter out so that's why they would prefer to
15 have low pressure sodium lighting. It makes
16 it easier for them to view the skies and the
17 planets and whatever they're looking at.

18 But another difference which you may
19 find opposition from the public is the color
20 rendition or what colors, how colors are
21 perceived under that light source.

22 What I have on this side on my left,
23 your right, is low pressure sodium. On this
24 side we have high pressure sodium. And if
25 you can see the color swatches on either

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1 side, you can see that the colors are
2 somewhat truer on this side.

3 You see, color, color is rated in light
4 sources on a color rendition scale. It's a
5 color rendering index rated between zero and
6 100. The closer you get to 100, the truer
7 colors are shown under that light source.

8 Incandescent lighting is rated at 100.

9 Fluorescent lamps can run anywhere
10 between 62 and say even 95 in special
11 application lighting for fluorescent
12 lighting.

13 High pressure sodium, typical high
14 pressure sodium like you see on this side has
15 a color rendering index of about 62. No, I'm
16 sorry. Take that back, 21, 21.

17 However, low pressure sodium has a
18 color rendering index rating of zero, so as
19 you can see, the -- You can't tell what
20 colors these are, but as Dr. Wainscoat said
21 it is one of the most efficient light sources
22 available to us today.

23 There is a handout that I gave out
24 earlier about the differences in lumen output
25 or light output between the different

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1 sources. And what I failed to do is put the
2 efficacy rating or how efficiently these
3 lights burn.

4 I'll just read some off to you. I'm
5 comparing the 150 watt range because that's
6 what we typically use in street lighting. I
7 checked with one of my distributors and he
8 checked with the County warehouse and he said
9 that 150 watt was the more prevalent wattage
10 that they use in street lighting. They had
11 also used some 100 watt and some 250 watt.

12 But in the 150 watt high pressure
13 sodium range, which is the C-150 you have a
14 lumens per watt rating of about 106, which is
15 not listed here. This is something I just
16 calculated.

17 So you have 106 lumens per watt of
18 energy used whereas in comparison with the
19 Sox lamp, which is what we typically call low
20 pressure sodium lamps, we have a lumens per
21 watt rating of about 166, so you're looking
22 at over a 50 percent increase in efficiency.
23 And with compared to the metal halide, which
24 is MH-150, you have a lumens per watt rating
25 of 83.

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1 So as you can see the differences
2 between the three, the Sox lamps or low
3 pressure sodium lamps are the most efficient
4 as far as energy savings.

5 Some of the advantages of low pressure
6 sodium is that it produces less glare, as Dr.
7 Wainscoat had said. As far as attracting
8 animals or sea turtles, I, I wasn't able to
9 find or -- not that I really looked that hard
10 but I had called some of our technical people
11 and they were unable to find any information
12 on whether it attracted sea turtles or not.

13 But I do remember reading an article
14 many years ago about, I believe it was an
15 electrical generating plant in Japan where
16 the water intake area was lit up and the
17 intakes were being clogged by sea eels
18 because they were attracted to the lighting
19 that was being shone out in that area where
20 they had changed it to low pressure sodium
21 lighting and they had eliminated that problem
22 of eels being attracted to the light and
23 clogging up the intakes.

24 So whether it attracts birds too, I
25 couldn't really tell you. I wasn't able to

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1 find any information as far as that was
2 concerned in that short time.

3 Compared to high pressure sodium, it is
4 a very efficient light source also. It's a
5 nicer light. And you can discern colors a
6 lot better, as you can see by the
7 demonstration kit.

8 Perhaps I think one point that I've
9 heard discussed was the ability to identify
10 colors as far as security maybe for police to
11 identify a fleeing suspect. They don't know
12 what kind of car, what color car he'd be
13 driving, what color clothes he'd be wearing
14 under something like this.

15 I have heard instances though where low
16 pressure sodium was used in security lighting
17 or night lighting in maybe parking lot areas
18 where kids would hang around, and once they
19 put in low pressure sodium lighting the kids
20 stopped hanging around because they looked
21 ugly under the light.

22 So I don't know if there -- I don't
23 think there was any scientific evidence to
24 that but that was, there was a couple of
25 instances I heard in the Mainland. I think

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1 it was in a 7-Eleven parking lot or a
2 convenience store type parking lot where the
3 kids would hang out.

4 And would you, would you guys want to
5 see the difference between the metal halide
6 also, sir?

7 MEMBER McCORD: Warren McCord. Are the two color
8 swatches exactly the same?

9 MR. KUMANO: Yes.

10 MEMBER McCORD: I was curious. Do you know what
11 the wattages of those two bulbs are?

12 MR. KUMANO: The wattage, this one is 70 watt and
13 this is 18.

14 MEMBER McCORD: 18?

15 MR. KUMANO: Yeah.

16 MEMBER MABERRY: Versus 70?

17 MR. KUMANO: Correct. Now, it's not going to give
18 you the same light output, it's just the
19 lower wattages we can fit into this kit.
20 It's not meant to show an equal amount of
21 light.

22 By the handout that I gave, you can --
23 these are the closest wattages of each type
24 light source compared to the high pressure
25 sodium lamps that you are using now. So in

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1 the case of 150 watt high pressure sodium,
2 the closest one that we could get to without
3 taking away any light from what you're used
4 to is the 135 watt.

5 Also interesting if you want to note,
6 under the column of lumens, for all the high
7 pressure sodium and the metal halide lamps, I
8 have two ranges or two listings of lumen
9 output. The first one is the initial lumen
10 output which is when the lamp is brand new
11 and the second number there is what we call
12 mean lumens which is at about 40 percent of
13 the rated life, so this is what -- And Rick,
14 if you want to correct me on this, this is
15 what designers use in cal -- doing their
16 lighting calculations.

17 CHAIR MOLINA: Mr. Maberry?

18 MEMBER MABERRY: Yes, sir. Thank you very much.

19 So based on what I'm looking at it
20 here, it appears that both the metal halide
21 and the high pressure sodium degrade over
22 time and they yet still consume the same
23 amount of energy in order to produce light
24 and does it, and it seems to appear that the
25 low pressure sodium just kind of goes out at

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1 some point; is that sort of correct?

2 MR. KUMANO: Yes. There is very little light
3 degradation or light curation under, with low
4 pressure sodium.

5 MEMBER MABERRY: Thank you, sir.

6 CHAIR MOLINA: Ms. Bernard?

7 MEMBER BERNARD: Hannah Bernard.

8 Thank you for your presentation. For
9 your information and the audience, I do have
10 a handout that I distributed that was pulled
11 from this technical report. This is from
12 Florida's Department of Environmental
13 Protection, it's a State agency. And it's,
14 it's quite a thick document and I didn't
15 think everybody needed copies of the entire
16 document. But of relevance a lot of
17 experiments have been done on the effects of
18 light on sea turtles and so this is a summary
19 that I passed out, which I will get you a
20 copy if you need for your future reference.

21 And they looked at different levels of
22 light and they graded it according to how
23 disruptive it was to the turtles' ability to
24 orient, whether it caused them to go toward
25 the light or it disrupted their ability to

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1 find a particular area they wanted to go to.

2 And what they found with low pressure
3 sodium is that it was minimally disruptive.
4 The scale for disruptability was extremely
5 disruptive, highly disruptive, moderately
6 disruptive or minimally disruptive.

7 So low pressure sodium, quote, is by
8 far the least disruptive light source among
9 those commonly used, just for your
10 information.

11 CHAIR MOLINA: Okay. Thank you for that
12 information. Sir?

13 MEMBER ALTENBERG: I have a question. There was
14 testimony submitted, I believe from Gerald
15 Fikuda on the cost comparison of the
16 different kinds of lamps, and they gave as a,
17 as the life, lifetime of low pressure
18 sodium -- Well, they gave high pressure
19 sodium a lifetime of 24,000 hours, which is
20 consistent with your sheet here, but for low
21 pressure sodium they listed 8,000 hours as
22 compared to 18,000 on your data sheet here.
23 It would seem the eight -- I've never seen
24 8,000 as a lifetime rating listed for low
25 pressure sodium. Do you have any, any

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1 comment on that?

2 MR. KUMANO: I just went by our product brochures.

3 We've done extensive testing on everything
4 that we manufacture, and for those wattages,
5 I'm showing an average rated life of 18,000
6 hours.

7 Now, how that averages, I don't know,
8 does anybody know or everybody knows how that
9 averages come to? Well, what they would is
10 they'll take like, say, for instance 100
11 lamps and burn them. I think it's like three
12 hours on, 15 minutes off and they'll cycle
13 them that way. At that 18,000 hours or
14 whatever hour rating a lamp is designated,
15 half of those lamps will be burnt out.

16 So it's possible that a low pressure
17 sodium lamp may only last 8,000 hours but an
18 average would be the 18,000, which is how the
19 industry rates their life on the lamps.

20 MEMBER ALTENBERG: Thank you.

21 CHAIR MOLINA: Okay. Committee Members, any -- Go
22 ahead. I'm sorry, Mr. Chong.

23 MEMBER CHONG: Rick Chong. A couple points.

24 There is no argument that low pressure
25 sodium is the more efficacious light source

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1 made that is commonly used in the world today
2 and that's as a bare lamp and I, and again I
3 repeated, as I stated earlier in our earlier
4 meetings, once you put the lamp in a
5 luminaire, some of that efficiency is lost.

6 As -- This is only an 18 watt lamp and
7 look how large it is compared to the 70 watt
8 HPS lamp sitting next to it. If you
9 remember, Bill George brought in a low
10 pressure sodium luminaire last meeting that
11 was, I believe, 35 watts and it was twice the
12 size.

13 So as you get into the higher wattage
14 low pressure sodium lamps, the lamps are much
15 larger. Optically, the larger the lamp
16 source, the harder it is to build a luminaire
17 that isn't so big that it is unacceptable
18 aesthetically.

19 So the optical design within the
20 luminaire so that these luminaires don't get
21 too large are sacrificed to a certain extent
22 so some of the efficiencies of the 160
23 something or 170 watt, lumens per watt is
24 lost.

25 A better comparison may be to look at

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1 comparable high pressure sodium street lights
2 to low pressure sodium street lights and the
3 efficiency of those street lights using those
4 two sources. I think it would be interesting
5 to see. I think the Committee should see
6 those numbers.

7 When it comes to design, I mean there's
8 been a lot of talk here about how efficient
9 the low pressure sodium is. As a designer,
10 we're concerned with efficiencies, I mean we
11 don't want to give a client light sources or
12 lamps that they have to change every two
13 days, but that's not the first question we
14 consider when we design.

15 I mean our goals are somewhat foot
16 candles and also brightnesses and what are we
17 putting on spaces, and we look at those kinds
18 of issues: Is color really important, things
19 like that. And then we look at the equipment
20 and lamps that are available to us to do that
21 job.

22 If we feel the lamp is right for the
23 job, regardless of its efficiency, we'll spec
24 it, and, and we'll make sure we explain that
25 to the client why we're doing it but, but it

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1 isn't just, oh, because it's the most
2 efficient light source, it's automatically
3 what we're going to use so keep in mind also
4 if you're thinking from the design side.

5 CHAIR MOLINA: Okay. Thank you very much. Mr.
6 Chong. Mr. Altenberg?

7 MEMBER ALTENBERG: I want to, I wanted to follow up
8 on that question of the efficiency.

9 A lot of the inefficiency of the
10 current defraction lens street lights that
11 Maui has to do with the fact that an
12 estimated 30 percent of the light just goes
13 up into the sky rather than on the ground.
14 So the, these efficiencies are, are estimated
15 in terms of the photons, the eye sensitivity
16 of the photon given out by the light.

17 Mr. Chong is suggesting that because of
18 the long distributed nature of the low
19 pressure sodium lamp the efficiencies are
20 lower are basically, are all the photons
21 being produced by the lamp going to be
22 delivered to the ground when one has a full
23 cutoff luminaire around it or is there some
24 reason that some of those photons would not
25 be going to the ground that would in the case

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1 of a high pressure sodium?

2 MR. KUMANO: Yeah, you're right. The, the
3 specification or the numbers that I've, I've
4 put down are just bare lamps, so efficiency
5 would really depend on the design of the
6 fixture, the reflector, shielding, height of
7 the pole, you know, all that kind of stuff, I
8 guess, would come into play.

9 MEMBER ALTENBERG: I mean is there any --

10 MR. KUMANO: That would be the same with the high
11 pressure sodium fixture too.

12 MEMBER ALTENBERG: Is there any reason that low
13 pressure sodium would lose photons whereas
14 high pressure sodium would not depending on
15 the design of the, I mean if the luminaire is
16 properly shielded?

17 MR. KUMANO: I don't see any reason why it would.

18 CHAIR MOLINA: Okay. Members, any last questions
19 for Mr. Kumano?

20 Okay. We have a question from one of
21 our resource people. Mr. George, maybe if
22 you want to come up and speak into the
23 microphone.

24 MR. GEORGE: I think I speak loud enough. My name
25 is Bill George --

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1 CHAIR MOLINA: No, you need to -- If you want to go
2 up to the podium, the lecturn. You can go
3 ahead and identify yourself also.

4 MR. GEORGE: My name is Bill George. Dexter, two
5 fast questions: Just on those two bulbs,
6 which would be more expensive, the LPS or the
7 HPS?

8 MR. KUMANO: Judging by pricing that we've seen in
9 street lighting contracts that we've done or
10 bid, low pressure sodium would be maybe,
11 let's see, 15 percent, 10 to 15 percent
12 higher.

13 MR. GEORGE: And the second question would be is
14 there any kind of special -- When the bulb is
15 bad, is there any special disposal that we
16 have to be aware of?

17 MR. KUMANO: Yes. New laws have been enacted. One
18 of that them is the Universal Waste Rule.
19 It's called the Universal Waste Rule and it
20 enables people to dispose of hazardous waste,
21 such as light bulbs, some of these light
22 bulbs are considered hazardous waste. And
23 it --

24 Well, the new laws make it easier for
25 people to dispose of them whereas in the past

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1 they would have to have special
2 documentation, have it specially packaged,
3 have to have a license carrier or truck to
4 haul away lamps, not that it's been done in
5 the past here, you -- I guess you and I know
6 that most of the lamps that are disposed of
7 in the State just go right into the landfill
8 because nobody enforces any of the laws right
9 now.

10 However, this Universal Waste Rule is
11 making it easier where people can send off
12 lamps without having any special permits to
13 be recycled or disposed of in a hazardous
14 waste dump.

15 MR. GEORGE: What I'm trying to get at is I tried
16 to ask the people that -- We have all of our
17 light bulbs sent back to the Mainland to be
18 put in a special hazard facility, but they
19 are not going to accept LPSs. Do you know
20 the reasons why they're not accepting that in
21 the shipment? They're telling us that we
22 have to try and work out a system here for
23 LPS.

24 MR. KUMANO: I've never heard of any reason why
25 they wouldn't, but it's been mainly

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1 fluorescent lamps that have been discussed.
2 In fact, the Universal Waste Rule for now
3 covers fluorescent lamps. It was basically
4 for fluorescent because it was the major type
5 that is being used. There's more fluorescent
6 lamps being disposed of than say, for
7 instance HID lamps, such as high pressure
8 sodium or low pressure sodium.

9 MR. GEORGE: My recommendation to the Subcommittee
10 would be that we find out exactly how we
11 should be able to dispose of these lamps and
12 whether the County of Maui -- Big Island is
13 having any problems with that.

14 My, my understanding is that for some
15 reason that it's a double glass enclosed
16 unit, and the sodium, the type of sodium they
17 have inside of it is highly reactive to
18 moisture, and that's why they say if I was
19 sending it and it was to collect any moisture
20 inside of it in transit, it could create a
21 fire on the airplane, so that's part of the
22 reasoning. I was just trying to see if you
23 were aware of that or not.

24 MR. KUMANO: Yeah, it is -- From what I heard, if
25 it's broken, like if you throw it on wet

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1 pavement, it could heat up or flame up from
2 what I've heard. I've never tried it myself
3 although I've been tempted just to see what
4 it looks like, but --

5 MR. GEORGE: Have we ever heard, have you ever
6 heard of any HPS doing that?

7 MR. KUMANO: No.

8 MR. GEORGE: That's all I have. Thank you.

9 CHAIR MOLINA: Thank you, Mr. George.

10 MEMBER MABERRY: Point of clarification.

11 CHAIR MOLINA: Certainly.

12 MEMBER MABERRY: Could I ask Professor Wainscoat to
13 respond to this particular issue that Mr.
14 George has brought up?

15 CHAIR MOLINA: Okay. Could we wait until -- I know
16 Mr. Kumano has to continue with his
17 demonstration.

18 MEMBER MABERRY: Okay.

19 CHAIR MOLINA: Mr. Maberry, if you could maybe when
20 we get into the discussion phase, we could
21 ask Mr. Wainscoat's comments on that.

22 MEMBER MABERRY: Could I then just follow up?

23 Are you aware of any special handling
24 for disposal for any of the metal halide, the
25 high pressure sodium or the low pressure

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- 1 sodium? At this point in time are you
2 personally aware of any special requirements
3 for disposal of any of these?
- 4 MR. KUMANO: No.
- 5 MEMBER MABERRY: Thank you very much.
- 6 CHAIR MOLINA: Thank you. Ms. Bernard?
- 7 MEMBER BERNARD: I was just going to ask Mr. George
8 if you had tried to do the same thing with
9 high pressure sodium and encountered any of
10 these problems.
- 11 MR. GEORGE: We put a high pressure sodium in a
12 container and sent it back to the Mainland.
13 They're not -- My understanding is because
14 the glass is stronger and it's not a two tube
15 fixture and it's not to size, so we just put
16 all our bulbs in together, fluorescent,
17 incandescent and high pressure sodium.
- 18 MEMBER ALTENBERG: From conversations I had with
19 Rob Billingsly, who's a lighting sales
20 representative in Honolulu, he said that the
21 high pressure sodium in metal halide lamps
22 have various heavy metals that are toxic
23 which are absent in the low pressure sodium
24 but that the proper recommended disposal of
25 low pressure sodium is that they be broken

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1 open in a, in a dumpster and then wet down so
2 that the sodium is, combines with the water
3 in a controlled environment and generates
4 sodium hydroxide and, and water.

5 So is that consistent with what you've
6 heard, that the low pressure sodium do not
7 constitute a hazardous waste once they are
8 wet, wetted down in a broken, and broken
9 apart?

10 MR. KUMANO: I, I saw that recommendation for
11 disposal in, in one of the -- I believe it's
12 in one of the handouts that you have for the
13 low pressure sodium.

14 They do, low pressure sodium lamps
15 still have mercury in them, which is very
16 hazardous, and that's why even fluorescent
17 lamps, as you know it, today is considered
18 hazardous waste.

19 As far as wetting it down or throwing
20 it in a, putting it in a barrel and soaking
21 it with water, I did see that recommendation
22 in one of my pieces of information, and I
23 think you have you should have a copy of
24 that, but it still does, as far as I know,
25 have mercury.

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1 MEMBER ALTENBERG: I was told the high pressure
2 sodium had mercury but low pressure sodium
3 did not; is that, is that possible?

4 MR. KUMANO: They both have, I'm almost certain
5 they both have mercury. In fact, one of the,
6 one of the, this handout shows you dimples in
7 the arc tube and let's see, the tube, sodium,
8 sodium retaining reservoirs.

9 It doesn't say mercury, but to, to
10 cause light to happen, I mean I would think
11 it would have to be mercury in it. I can
12 double check that for you. I was, I'm under
13 the impression that it is.

14 CHAIR MOLINA: Okay. Members, at this point the
15 Chair would like to proceed. I believe Mr.
16 Kumano has a demonstration for the metal
17 halide lights.

18 ?: Mike, Chairman Mike Molina, he has a question.

19 CHAIR MOLINA: Okay.

20 MR. KUMANO: What would you like to see the metal
21 halide compared to? Because I can only pull
22 out one at a time and I can only show two.

23 CHAIR MOLINA: Would it be, would it be easier for
24 you to do the metal halide after or --

25 MR. KUMANO: Doesn't matter. I can take the

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1 question.

2 MEMBER WAINSCOAT: I just, Richard Wainscoat. I
3 just wanted to clarify that point. The low
4 pressure sodium, I think, contains small
5 amounts of neon and argon, and if you use the
6 grading you're going to see the lines on some
7 of those. If you look at the high pressure
8 sodium, you can see mercury lines in it.

9 CHAIR MOLINA: Okay. Maybe at a later time we can
10 go individually, the Members can go and view
11 that. Do you need a brief break, Mr. Kumano,
12 to change --

13 MR. SUTROV: No. But it will take about five or
14 six minutes for it to heat up to full light
15 output.

16 CHAIR MOLINA: Okay. What we'll do, we'll go ahead
17 and take a short break until the light heats
18 up. So Committee Members, we'll take a five
19 minute break at this point.

20 MR. SUTROV: Okay. Which one did you want to
21 compare it to?

22 CHAIR MOLINA: I think we wanted to compare it to
23 what, the high, the high pressure sodium and
24 the --

25 ?: I don't need to see it.

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1 CHAIR MOLINA: Okay. We can, we can do both.

2 Okay. Why don't we go ahead and just break

3 and we can talk about it? (Gavel.)

4 RECESS: 9:47 a.m.

5 RECONVENE: 9:56 a.m.

6 CHAIR MOLINA: Okay. The Subcommittee on Outdoor

7 Lighting Standards is now back in session.

8 Currently we have Mr. Dexter Kumano of the

9 Phillips Company on Oahu doing a

10 demonstration for us. And at present we have

11 the metal halide light as compared to the low

12 pressure sodium.

13 So Mr. Kumano, if you'd like to

14 continue with your presentation.

15 MR. KUMANO: Thank you.

16 Yeah. What we have here is metal

17 halide lighting which is used a lot in sports

18 lighting, area lighting, even retail lighting

19 because of its high efficiency compared to

20 such things as incandescent or even

21 fluorescent where we need a bigger punch of

22 light. Metal halide has been used quite a

23 bit in interior lighting as well. It's not

24 just in industrial applications.

25 Phillips, for one, has developed new

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1 metal halide types of lighting with a ceramic
2 arc tube which is the arc tube which is
3 similar to the high pressure sodium lamp
4 rather than the quartz arc tube that you see
5 in this particular light.

6 Keeping color is more stable and
7 thereby, you know, you're looking up at a
8 ceiling or at a wall and you don't see
9 different shades of light. Sometimes metal
10 halide typically will, will change what we
11 call a color, do a color shift where some
12 light may look pink, some may look a little
13 green, you know, a little green tinge so what
14 was the problem with metal halide lamps but
15 now we've developed a light source that will
16 stabilize that, that color shift. Sorry.

17 CHAIR MOLINA: Go ahead.

18 MEMBER MABERRY: Mike Maberry. The color shift
19 you're talking about, does that have to do
20 with the type of metal that is used in the
21 tube?

22 MR. KUMANO: Yeah. From what I, the way it was
23 explained to me, metal halide lamps, it's
24 like chicken soup. Sometimes you, you know,
25 it's made slightly differently from one batch

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1 to another, so it's, it's good practice if
2 you're going to relamp an entire building or
3 on entire area at least to get the lamps all
4 from the same batch.

5 And that is, and that is true where,
6 you know, if you get it from the same batch,
7 then you're going to have the same, typically
8 the same color shifts throughout life so it
9 won't look different from fixture to fixture.

10 MEMBER MABERRY: Thank you, Mr. Chair.

11 CHAIR MOLINA: Thank you. Mr. Kumano, any other --

12 So one question, I heard that the City and
13 County of Honolulu is considering low
14 pressure sodium lighting. Can you elaborate
15 on that?

16 MR. KUMANO: Yes. Actually the City and County of
17 Honolulu already uses low pressure sodium in
18 street lighting in certain areas, residential
19 areas basically. We, actually we now hold
20 the contract for the low pressure sodium for
21 the City and County. It's --

22 In past years it had varied in
23 wattages, I think between 35, 55 and one 90
24 watts. And presently this, this year, it was
25 only 55 watts that they, that they are using

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1 so they just kind of slipped it down to one
2 wattage of low pressure sodium.

3 MEMBER MABERRY: Quick follow-up question, Mr.
4 Chair. Mike Maberry.

5 What about the military bases? I
6 understand that some of the military bases
7 are also using low pressure sodium. Do you
8 have any information regarding that there on
9 Oahu?

10 MR. KUMANO: I believe Schofield Barracks is -- I
11 live near to it so, so I've seen it but I
12 haven't seen places like Hickam but I would
13 assume that they do use it --

14 MEMBER MABERRY: Thank you, Mr. Chair.

15 MR. KUMANO: -- for, for street lighting and, and
16 maybe outdoor lighting.

17 CHAIR MOLINA: Thank you. Committee Members, any
18 other questions for Mr. Kawano at this time?

19 Okay. Mr. Kumano, do you have anything
20 else you'd like to add or any other
21 additional demonstrations at this time?

22 MR. KUMANO: No, not unless you want to see high
23 pressure sodium next to metal halide.

24 CHAIR MOLINA: Committee Members, would you like to
25 see that demonstration?

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- 1 MEMBER MABERRY: Mr. Chair, considering that we've
2 seen these two, I would greatly appreciate it
3 if we go ahead and see the third combination.
- 4 CHAIR MOLINA: Dr. Altenberg?
- 5 MEMBER ALTENBERG: Question. Do you know the
6 wattage of that metal halide?
- 7 MR. KUMANO: It's 100 watt.
- 8 MEMBER ALTENBERG: Versus the 17 watt?
- 9 MR. KUMANO: 18 watt.
- 10 MEMBER ALTENBERG: Oh, 18 watt?
- 11 MR. KUMANO: Yeah.
- 12 MEMBER ALTENBERG: On the low pressure sodium.
- 13 MR. KUMANO: But as Mr. Molina had, had asked or I
14 answered earlier, no matter what wattage you
15 put in there of low pressure sodium, the
16 color rendition is going to be the same, it's
17 just going to be brighter.
- 18 MEMBER ALTENBERG: Yeah.
- 19 CHAIR MOLINA: Okay. Mr. Kumano, do you need
20 additional time to set up?
- 21 MR. KUMANO: No. I can just pop it in and in the
22 meantime while it's warming up, I can maybe
23 answer any other questions that may come
24 about.
- 25 CHAIR MOLINA: Okay. Committee Members, any

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1 additional questions at this time? Otherwise
2 we'll go ahead and take a brief break and
3 then come back.

4 Okay. Hearing no additional questions
5 or comments, we'll take a short break to get
6 our last demonstration set up. (Gavel.)

7 RECESS: 10:01 a.m.

8 RECONVENE: 10:05 a.m.

9 CHAIR MOLINA: (Gavel.) The Subcommittee on
10 Outdoor Lighting Standards meeting is now
11 back in session. We have Mr. Kumano from
12 Phillips Lighting to give us our final
13 demonstration. Proceed, Mr. Kumano.

14 MR. KUMANO: What I have inserted in this demo box
15 now is high pressure sodium on this side
16 compared to the metal halide on this side.

17 And as you can see, the difference is
18 color of the light. The metal halide being a
19 nice, white, crisp light better color
20 rendering than the, color rendering on this
21 side than the high pressure sodium on this
22 side.

23 On that color rendering index that I
24 was talking about earlier, metal halide,
25 typical metal halide is at about 62 to 65

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1 whereas this again is 21, so you can see the
2 dramatic difference between the low pressure
3 sodium and the high pressure sodium, and now
4 an equally greater difference between high
5 pressure sodium and metal halide.

6 Metal halide, as I said, is being used
7 in a lot of interior applications too and
8 design because of the nice, crisp, white
9 light and color rendition. And I think to
10 eliminate the use of these types of lights,
11 my opinion, my personal opinion, I think
12 would be, would be, a little stiff.

13 For exterior lighting sometimes you
14 need some nice dramatic lighting. I'm, I'm
15 sure you wouldn't want to light up a garden
16 area in a resort with something like low
17 pressure sodium where you couldn't tell the
18 green bush from the red flower.

19 CHAIR MOLINA: Members, any questions? Okay. Mr.
20 Maberry to be followed up by Ms. Bernard.

21 MEMBER MABERRY: Follow-up on that, sir.

22 However, do you see any advantage to
23 putting the light up in the area? Wouldn't
24 you, to follow your line of reason, you would
25 want to put the light directed specifically

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1 on the object that you want color rendition?
2 What's, what would be the point in putting
3 light up in the air if you're trying to get
4 color rendition on a specific object?

5 MR. KUMANO: Uplighting on buildings maybe to
6 dramatically show the facade of a building or
7 even like, say for instance, Hilton Hawaiian
8 Village, to show a mural on the side of the
9 building.

10 CHAIR MOLINA: Go ahead, Ms. Bernard followed by
11 Mr. Chong.

12 MEMBER BERNARD: Hannah Bernard. Just for your
13 information again, according to the tests
14 that have been done on sea turtles, it would
15 be the metal halide and mercury vapor
16 fluorescent tube lighting would be considered
17 extremely disruptive, with high pressure
18 sodium, which you've got up there, being
19 highly disruptive next. So it's a little bit
20 clear, and just from looking at it, you can
21 see the metal halide is much brighter, whiter
22 and it appears that that seems to be an
23 adverse impact on turtles.

24 MR. KUMANO: I'm sure it would need to be
25 determined areas that you would not want to

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1 use metal halide.

2 CHAIR MOLINA: Mr. Chong?

3 MEMBER CHONG: Follow-up to Hannah. I throw

4 caution to just leaving a lamp brighter. You

5 need to look at what the wattage is. And

6 there have been studies that -- I mean

7 because the white, the lamp is whiter, people

8 feel it is brighter. I mean that's why there

9 is a trend in the lighting industry for us

10 lighting designers to use metal halide lamps

11 in parking lot lighting because -- not

12 because it's more efficient, not because it

13 has a longer lamp life, but purely because

14 the patrons who, who go to the shopping

15 centers feel safer. The color rendition is

16 better so the visibility is better, and

17 that's, that's been studied, so that, that's

18 why. I mean clearly, that's bright or that's

19 not. I don't think that's a fair comparison.

20 Follow-up to Mike here. There's lots

21 of things we like to uplight. That doesn't

22 mean we're purposely lighting the sky. I

23 mean there's, there's lots of reasons why we

24 uplight trees and not downlight trees or

25 other landscape or architectural artifacts.

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1 I agree we probably should do a better
2 job of controlling where that light is and we
3 don't intentionally light the sky. We're
4 trying to light objects to give people who go
5 to those places some value, some, you know,
6 overall experience. Thanks.

7 MEMBER MABERRY: Follow-up on the comment of
8 feeling safer. If our military bases feel
9 that, who obviously require considerable
10 security, especially this day and age, feel
11 that they're able to meet their security
12 requirements by utilizing low pressure
13 sodium, then, then I have to question, you
14 know, if we would definitely need more data
15 to establish what, what makes you feel safer.

16 CHAIR MOLINA: Okay. Thank you.

17 Members, any last questions for Mr.
18 Kumano at this time? Seeing none, Mr.
19 Kumano, any last comments --

20 MR. KUMANO: Yeah.

21 CHAIR MOLINA: -- at this point before we --

22 MR. KUMANO: As far as the disposal question, there
23 is a name that I can give you later to call.
24 He's with the State Department of Solid and
25 Hazardous Waste. This woman has worked with

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1 me in doing seminars regarding disposal of,
2 of lamps and light bulbs, and she's not in
3 the enforcement side of it but more on the
4 outreach to help people, to help customers --
5 not customers but to help individual
6 companies to determine what is hazardous
7 waste and how to effectively dispose of it,
8 so I can leave that with you also.

9 CHAIR MOLINA: Okay. Thank you, Mr. Kumano. On
10 behalf of the Subcommittee, we'd like to
11 thank you for sharing this information with
12 us.

13 And Committee Members, if you have any
14 additional questions, feel free to submit
15 them to our staff so that we can relay them
16 to Mr. Kumano.

17 So the Chair will take one last brief
18 break so I can get set up over there and Mr.
19 Kumano can remove his equipment. (Gavel.)

20 RECESS: 10:10 a.m.

21 RECONVENE: 10:14 a.m.

22 CHAIR MOLINA: Members, we have had a request from
23 a member of the public would like to share
24 his thoughts with you. In the Maui News the
25 meeting time was still left at ten o'clock

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1 instead of the nine o'clock start time, so
2 out of fairness the Chair would like to
3 permit the gentleman to testify if there are
4 no objections from the subcommittee?

5 MEMBER MABERRY: No objection.

6 MEMBER ALTENBERG: No objections.

7 MEMBER McCORD: No objections.

8 CHAIR MOLINA: Okay. Thank you. Members, the
9 testifier's name is Mr. Donald Jensen.

10 And as a reminder to Mr. Jensen, you'll
11 be allowed three minutes and you will have an
12 additional minute to conclude. And if it's
13 the -- your option to come, would like an
14 additional three minutes, the Chair will
15 grant you that if you need that amount of
16 time, so if you will proceed, Mr. Jensen.

17 . . . BEGIN PUBLIC TESTIMONY . . .

18 MR. JENSEN: Thank you, Mr. Chairman --

19 CHAIR MOLINA: And please state your state for the
20 record also.

21 MR. JENSEN: -- and Committee. My name is Donald
22 Jensen, a resident of Maui Meadows, and I
23 support everything you're doing here. I'm a
24 member of the Maui Citizens Police Auxiliary
25 Patrol, and I also was the security advisory

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1 for Maui Meadows Homeowners for many years.
2 Also I have many years of observing crime and
3 what may deter crime.

4 I've always believed that lighting,
5 which was put forward by many people as the
6 ultimate security device, actually is a
7 negative. I was able to compile the burglary
8 statistics for Maui Meadows, for example, for
9 a number of years and more than 80 percent of
10 the burglaries occurred during the daytime.
11 By and large, most of our criminals are
12 paranoid and they are not at home in the
13 dark. They don't want to be out in the dark.
14 Most people don't want to be out in the dark.
15 That's my experience from being in the Army
16 and I was in the aggressor forces. We'd go
17 out at night and we could do anything to the
18 regular troops if we did it at night. They
19 were awake during the day, they weren't wake
20 at night.

21 My own personal experiences of many
22 years of being in business on the Mainland, I
23 had a business that for five years was
24 located in an old unlit industrial area. I
25 had no burglaries. I moved to a highly lit

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1 commercial building on a well-traveled street
2 and the next five years I averaged two and a
3 half burglaries a year consistently.

4 So I just want to say that in my
5 opinion I would like to see probably less
6 street lighting as a deterrent to crime
7 rather than more.

8 Thank you for your time.

9 CHAIR MOLINA: Thank you, Mr. Jensen. Committee
10 Members, any questions for Mr. Jensen?

11 Hearing none, thank you very much, sir.

12 MR. JENSEN: Thank you very much.

13 CHAIR MOLINA: Okay. It is after ten o'clock so
14 the Chair will officially close testimony at
15 that time so for the record 10:17.

16 . . . END OF PUBLIC TESTIMONY . . .

17 CHAIR MOLINA: Okay. Members, the next item I
18 would like to discuss is relative to
19 requesting resource people from the County of
20 Hawaii to attend one of our Subcommittee
21 meetings.

22 In recent discussions with the people
23 from the Big Island there appears to be some
24 reluctance on their part to attend our
25 meetings because of schedules and workloads.

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1 However, they have invited us to visit the
2 Island of Hawaii so we can see firsthand how
3 low pressure sodium works for different
4 applications.

5 And also I'd like to ask you to note a
6 memo dated February 6, 2002 from the
7 Subcommittee Chair outlining various
8 discussions with County of Hawaii personnel
9 which outlines their experiences with the use
10 of low pressure sodium lights, so if you
11 would make note of that and look that over.

12 And furthermore, as noted in a
13 memorandum dated February 8th from the
14 Council Chair, the Council has not made it a
15 practice to fund additional expenses, such as
16 travels for subcommittees, so therefore our
17 request to subsidize a trip for the entire
18 subcommittee to the Big Island was not
19 authorized.

20 However, now that we have had our
21 demonstration comparing the different
22 lighting fixtures, I would like to pose the
23 following questions to the Subcommittee for
24 their consideration or your consideration,
25 I'd like to basically ask was the

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1 demonstration adequate and does the
2 Subcommittee still feel the need to view
3 practical applications of low pressure sodium
4 within the County of Hawaii?

5 So what I'll do is maybe just go down
6 the line starting first with the Subcommittee
7 Vice Chair, your comments?

8 VICE-CHAIR TAVARES: Yeah, I would like to see it
9 in its applications. I mean it's nice that
10 we have a demonstration here, we get the gist
11 of what the color renditions are, but this is
12 different having it in a box in a closed room
13 and being out where there are street lights
14 or outdoor lights that are of different types
15 that we could actually see.

16 You know, I don't know how exactly we
17 could do this, but as far as my, my going
18 over to the Big Island, I'd willing to pay
19 for it, you know, myself.

20 CHAIR MOLINA: Okay. Thank you, Ms. Tavares. Mr.
21 McCord, your comments?

22 MEMBER McCORD: I've been struggling to try and not
23 get behind the power curve here with all the
24 lumens and everything else, but I have a
25 position, and I don't know whether this is

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1 the right time or not to do it, but let me
2 have two minutes.

3 CHAIR MOLINA: Okay. We'll pass you for now and go
4 to somebody else. Okay. All right. Mr.
5 Maberry, your thoughts on --

6 MEMBER MABERRY: I actually go to the Big Island on
7 a regular occasion but I would be happy to --
8 at my own expense to accompany the Vice Chair
9 or whatever is appropriate.

10 CHAIR MOLINA: Okay. Thank you. Mr. Chong?

11 MEMBER CHONG: I'm over on the Big Island probably
12 when we have work there so if it can be
13 coordinated, I would do it on my own expense
14 too.

15 CHAIR MOLINA: Okay. Thank you. Ms. Bernard?

16 MEMBER BERNARD: I, I would definitely like to go
17 and, and not just to see the lighting but to
18 speak to the safety issues that you will
19 refer to the memo from February 6th, it
20 seemed like the Big Island folks had some
21 particular opinions on, on safety and their
22 experiences there, so I think that would be
23 very helpful for all of us.

24 CHAIR MOLINA: All righty. Thank you. And Dr.
25 Altenberg?

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1 MEMBER ALTENBERG: Two, two questions. The amount
2 of County resource that was requested for
3 funding a trip of the Subcommittee Members to
4 the Big Island, I'm wondering if a taking a
5 spot, some spot on Maui and actually
6 retrofitting with low pressure sodium lamps
7 that we are considering might be even more
8 effective use of similar funds.

9 The other is that the Big Island low
10 pressure sodium lamps are for the, from what
11 I had seen from the previous visit there,
12 unshielded. And since Honolulu has some
13 neighborhoods that have low pressure sodium
14 lighting of more recent vintage, I'm
15 wondering if those, those examples of
16 lighting are fully shielded and might be a
17 better place to see what we're considering
18 for the future of Maui. Perhaps Mr. Kumano
19 can address that?

20 CHAIR MOLINA: Okay. Mr. Kumano, if you'd like to
21 come on up to one of the hot seats here and
22 maybe respond to Dr. Altenberg's suggestion?
23 Dr. Altenberg, I guess just for the record,
24 would you --

25 MEMBER ALTENBERG: Yes.

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1 CHAIR MOLINA: -- restate --

2 MEMBER ALTENBERG: I'm wondering, as I understand,
3 there are neighborhoods on Oahu that are
4 lighted with low pressure sodium. And since
5 those are more recent installations, I'm
6 wondering if those are using fully shielded
7 luminaires.

8 MR. KUMANO: I don't -- The one that I have in mind
9 is not so recent. I, I know there is one in
10 Kahala area has low pressure sodium lighting
11 and I believe that's been in there for quite
12 a few years now. As far as the shielding is
13 concerned, I, I couldn't tell you.

14 MEMBER ALTENBERG: Let me see. Do you know whether
15 it would be -- whether any of the companies
16 would provide samples that we could install
17 in a neighborhood or a parking lot on Maui as
18 a demonstration of low pressure sodium for
19 people on Maui to be able to examine?

20 MR. KUMANO: I'm quite sure they would. I can give
21 you a few names too.

22 MEMBER ALTENBERG: So the cost to the County might
23 be simply the cost of installation or do you
24 think they might even provide that?

25 MR. KUMANO: No, that's stretching it.

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1 MEMBER ALTENBERG: Thank you.

2 CHAIR MOLINA: Okay. Thank you, Dr. Altenberg.

3 Mr. Chong?

4 MEMBER CHONG: The State of Hawaii Kona airport has
5 these street lights that are fully shielded.
6 They're on that secondary road that go off to
7 nowhere. I think in their big, big grandeur
8 plans when the economy was robust and
9 tourists were coming planeload after
10 planeload they had this huge plan to expand
11 the airport, and they have since pulled that
12 back but they built the road, so maybe
13 they're hoping the tourists will come because
14 they built the road.

15 But anyway they do have fully shielded
16 full cutoff low pressure sodium street lights
17 and just up, just up out of the airport along
18 the highway you will see examples of
19 partially shielded low pressure sodium street
20 lights. So you don't have to go very far in
21 Kona to see examples of, of good, bad and
22 badder or worse or ugly.

23 CHAIR MOLINA: Okay. Thank you, Mr. Chong. Mr.

24 McCord, are you ready to --

25 MEMBER McCORD: I'm ready for my two minutes.

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1 CHAIR MOLINA: Go. Proceed, sir.

2 MEMBER McCORD: Warren McCord. I think that we
3 need to be very careful that we don't get
4 bogged down in a totally comprehensive
5 program here that when it finally comes to
6 trying to pass the law, it's just going to
7 get bogged down and never happen.

8 I'm very concerned that we need to do
9 something that is a little simpler so that we
10 can understand what's going on, that we can
11 get our legislative people to come along with
12 us and to protect the sea turtles, birds and
13 Haleakala, which are the three big points at
14 this juncture what we need to, to actually
15 impact.

16 I would vote for a demonstration on
17 Maui, and I have the perfect example. Mr.
18 Dowling installed so many street lights up
19 near King Kekaulike that you could sit in a
20 chair and read a book. And I would suggest
21 that what we do is we retrofit those street
22 lights at King K to low sodium vapor and it
23 would do two things: One, it would please
24 everybody in Kula 200; it would please a lot
25 of people who drive to Kula and have their

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1 visual purple destroyed after they leave
2 Pukalani and try to get through those lights;
3 and it would be a perfect example where we
4 could actually make an impact.

5 Whether it's possible or not, I don't
6 know, but I think we ought to try. And I
7 would like to see us try to get something
8 done rather than get too bogged down in the
9 total picture.

10 I understand security lighting and,
11 and, you know, whether we reduce the lighting
12 at a whole complex in the hotel or whether we
13 just, you know, talk about a late night bar,
14 but let's keep this simple. I'm sorry I
15 can't be here for the next session but I
16 really would like to see some action on this
17 and get something done. And if we did a
18 demonstration project on Maui, not only could
19 this Committee then see this operation but we
20 could take Police Department, Public Works
21 Department, et cetera, et cetera, a whole lot
22 of people who would not be able to go
23 somewhere else and have them experience the
24 same thing and maybe get them on board.
25 Thank you.

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1 CHAIR MOLINA: Thank you, Mr. McCord. Your
2 thoughts and considerations are well taken.
3 Keep it simple. Right.

4 Okay. Members, assuming if we decide
5 to go with the option of going to the Big
6 Island, a couple of things for you to
7 consider: In light of the decision that was
8 made by the Council Chair not to fund the
9 whole Subcommittee, would the Committee
10 consider just sending the two Councilmembers
11 to the Big Island and then having a report
12 filed, or I guess from what I've heard
13 earlier most of you would like to at least
14 participate there, so with that, if the
15 entire Subcommittee would like to view the
16 Big Island lighting, again the Members, you
17 would have no problems with having your trip
18 funded out of your own pockets or departments
19 for which you work for? Am I guessing
20 correctly?

21 ? : You're correct.

22 CHAIR MOLINA: Okay. All right. Thank you then.

23 So we, just to let you know, if you do
24 meet, if we do meet on the Big Island, it
25 will have to be posted as an official meeting

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1 both here on Maui and on the Big Island. And
2 obviously we're going to have to pick a date
3 for travel and then that's, that's another
4 big thing is the date and time. It will
5 probably -- Obviously we would have to do our
6 work at night to view all the lighting, so at
7 this point I haven't picked any dates yet,
8 but I would be willing to entertain some
9 suggestions.

10 So let's start first with on this side
11 of the room. Dr. Altenberg, any particular
12 dates? Now, for your information, the 90
13 days for the Subcommittee, maybe if we could
14 get a comment from our analyst. Gary, if you
15 could review that for us?

16 MR. SALDANA: Yeah. Just as a, a note, the life of
17 the Subcommittee is through to April 2nd of
18 this year. It was 90 days, so we're getting
19 very close to that timeframe.

20 However, I should note that the
21 Subcommittee, and you can consider this at
22 your next meeting, the Subcommittee does have
23 the option of asking for an extension on that
24 of another 90 days. If you do that, you
25 would have to make a formal vote requesting

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1 the Public Works and Transportation Committee
2 to extend your, extend your tenure for
3 another 90 days, so you do have that option
4 available to you based on, based on your
5 discussion and based on the proceedings over
6 the next couple of meetings.

7 CHAIR MOLINA: Okay. Thank you, Mr. Saldana.

8 So we have that option to request an
9 additional, up to an additional 90 days to
10 extend the life of the Subcommittee if we do
11 decide to entertain going to the Big Island,
12 which I see the majority of the Members would
13 like to do that.

14 What I think -- I know a couple of
15 Members have expressed interest as far as
16 rather than going to the Big Island having
17 lights retrofitted here on Maui as a
18 demonstration. I don't know who to ask as
19 far as what that would cost. Maybe we could
20 get comments from Mr. Kumano as well as maybe
21 someone from Public Works, maybe Mr. Hanzawa
22 or Mr. Lee as to what kind of cost we're
23 looking at.

24 I'm, I'm sure Mr. Kumano would have to
25 see exactly what's out there in the area that

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1 Mr. McCord was mentioning.

2 MR. KUMANO: As far as cost on a demonstration, I,
3 I really couldn't tell you. Phillips, who I
4 work for, does not manufacture fixtures for
5 the U.S. market. They do it in Europe but we
6 don't market them here. There are several
7 fixture manufacturer representatives in
8 Honolulu who could probably give you a better
9 idea on that.

10 CHAIR MOLINA: Okay. Thank you.

11 First of all, any comments from Mr.
12 Hanzawa or Mr. Lee on this matter at this
13 time?

14 MR. LEE: As far as -- Lloyd Lee from Public Works.
15 As far as the cost for installation, I would
16 defer to Maui Electric. They're doing a lot
17 of our maintenance in our fixtures and
18 installation of new fixtures, so I would ask,
19 request Maui Electric to come up with some
20 kind of cost if we need to do this.

21 CHAIR MOLINA: Okay. Thank you, Mr. Lee. Mr.
22 Maberry, you had a question?

23 MEMBER MABERRY: I'll hold it, sir. Thank you.

24 CHAIR MOLINA: Okay. One thing to consider as far
25 as the advantage of going to the Big Island,

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1 we have the staff there on the Big Island
2 that would be accessible to us so they could
3 answer a lot of questions that we may have
4 with regards to how their lighting ordinance
5 impacts their community. Mr. Chong?

6 MEMBER CHONG: Another thing to consider if you're
7 going to do it and retrofit some, an
8 installation here up at Kula or whatever in
9 Maui is the availability of the luminaire.

10 Since low pressure sodium is not a
11 commonly specified item, we normally have to
12 wait for them to be manufactured. And unless
13 the City and County of Honolulu or the County
14 of Hawaii, on the Big Island has a few
15 sitting in their warehouse, you're going to
16 wait at least six to eight weeks for the
17 luminaire to be manufactured and shipped out
18 from the factories in the U.S.

19 CHAIR MOLINA: Mr. Maberry?

20 MEMBER MABERRY: To follow-up if I could, sir? So
21 you say there is, your company does provide
22 luminaires for the European market?

23 CHAIR MOLINA: Okay. Mr. Kumano?

24 MEMBER MABERRY: Sorry. He's nodding.

25 MR. KUMANO: Yes, they do. We don't market it here

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1 in the U.S.

2 MEMBER MABERRY: So you do not stock it, I mean as
3 soon as it's manufactured, it's shipped off
4 to, to Europe?

5 MR. KUMANO: I couldn't even tell you. No, it's
6 manufactured in Europe. Phillips is --

7 MEMBER MABERRY: Oh, it's manufactured in Europe?

8 MR. KUMANO: Yeah. Phillips is actually a Dutch
9 company.

10 MEMBER MABERRY: I see, sir.

11 MR. KUMANO: And they market it in Europe only.

12 And I couldn't even tell you if they make a
13 low pressure sodium fixture. I know they
14 make fluorescent ones but I don't know about
15 low pressure sodium.

16 MEMBER MABERRY: So your company though -- Excuse
17 me. Follow-up, sir. Your company does
18 produce a lot of low pressure sodium lamps
19 for the luminaires that are used throughout
20 Europe?

21 MR. KUMANO: Yes.

22 MEMBER MABERRY: So it's extensively used in Europe
23 as far as you know?

24 MR. KUMANO: Yes.

25 MEMBER MABERRY: Thank you very much, sir.

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1 CHAIR MOLINA: All right. Thank you, Mr. Maberry
2 and Mr. Kumano.

3 As far as the date of our actual
4 meeting there, we could consider using one of
5 our normally scheduled meetings so we're
6 looking at maybe a Wednesday. Leave here
7 during the afternoon hours and schedule a
8 time and coordinate things with the Big
9 Island people.

10 Now, for your information, to have an
11 official meeting we would have to have
12 quorum. We would just be required to have
13 four people, so for those of you who have
14 concerns about not wanting to go to the Big
15 Island, it's important to let us know now.
16 But we would have to have a minimum of four
17 people to constitute an official meeting
18 there.

19 As far as dates go, maybe what I'll do
20 is before we wrap up today and give you folks
21 time to think about as far as what date would
22 work for all of you and we can come back to
23 that.

24 So if there's no objections, I'd like
25 to proceed with the rest of the meeting and

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1 we can come back and discuss a potential date
2 for a meeting on the Big Island.

3 Dr. Altenberg?

4 MEMBER ALTENBERG: Can any concrete proposal be
5 made to, for a retrofitting demonstration to
6 come up with a cost estimate? And is that
7 something that we could make a --

8 CHAIR MOLINA: A request?

9 MEMBER ALTENBERG: Yeah.

10 CHAIR MOLINA: Okay. The Chair will consider that
11 request. We can ask maybe Mr -- maybe our
12 people from Public Works and, I don't know,
13 Maui Electric, I guess, Mr. Nakama.

14 Any comments to that, Mr. Nakama, at
15 this time?

16 MR. NAKAMA: Randy Nakama, Maui Electric.

17 We could come up with the labor cost.

18 As far as the luminaire, I'm not sure who
19 we'll get that from.

20 CHAIR MOLINA: All right. Mr. Maberry?

21 MEMBER MABERRY: A point of information, sir. It
22 looks like our, at least two meetings in
23 March are actually scheduled on Thursdays.

24 CHAIR MOLINA: Okay. Mr. Saldana?

25 MR. SALDANA: Yes, that is correct. The next

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1 meeting of the Subcommittee is March the 7th
2 and then the final scheduled meeting at this
3 point is two weeks later, March 21st.

4 CHAIR MOLINA: Okay. Thank you. So those are two
5 dates we're looking at. More I think
6 realistically the 21st would be a better date
7 to consider if we do consider going to the
8 Big Island. Mr. Chong?

9 MEMBER CHONG: If we're going to -- I'm assuming in
10 the subdivision that you mentioned about up
11 in Kula that these are not cutoff luminaires?

12 MEMBER McCORD: This is not a --

13 CHAIR MOLINA: Mr. McCord?

14 MEMBER McCORD: -- subdivision, it's a state
15 highway.

16 MEMBER CHONG: But it's not, it's not a cutoff
17 luminaire?

18 MEMBER MABERRY: May I respond? They are, they are
19 retrofit shielded Cobra head high pressure
20 sodium lamps.

21 MEMBER CHONG: But shielded means the shield was
22 added after the fact?

23 MEMBER MABERRY: The shield, they were retrofit
24 shielded, correct.

25 MEMBER CHONG: May I suggest if we're going to do a

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1 demonstration on Maui that as well as doing a
2 low pressure sodium luminaire, we should look
3 at installing a fuel cutoff Cobra head high
4 pressure sodium luminaire, so that that
5 comparison can also be made --

6 CHAIR MOLINA: Okay. Wait.

7 MEMBER CHONG: -- to the non cutoff luminaire.

8 CHAIR MOLINA: All right. We can take that all
9 into consideration for a Maui demonstration.
10 Dr. Altenberg?

11 MEMBER ALTENBERG: Actually there are quite a
12 number of sites with full cutoff high
13 pressure sodium luminaires already on Maui,
14 so I don't think that you would need to
15 expend any resources in demonstration, just
16 collect the locations where you can already
17 see that.

18 MEMBER CHONG: It's just nice to see them all in
19 one -- Like today's demonstration, to be able
20 to see them side by side is worth -- The
21 demonstration would be much more valuable
22 than having to drive and clock in your memory
23 what that one looked like.

24 CHAIR MOLINA: Excuse me, Mr. Chong and Mr.
25 Altenberg, okay. This is good discussion.

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1 Why don't we -- We can go ahead and save that
2 because I'd like to proceed with the rest of
3 our meeting at this point and we can work
4 that out the finite details of our Maui
5 demonstration. We can get that information
6 to Gary.

7 Okay. Mr. Lee, comments?

8 MR. LEE: Yes, Chair. First of all, the County of
9 Maui does not control State DOT street lights
10 so you need permission from the State DOT if
11 that's the area you want to deal with as far
12 as using that road fixtures as mentioned by
13 Mr. McCord, so we have no control of that.

14 And the other thing, as far as from
15 Maui Electric as far as coming up with a cost
16 estimate, you need to know specific details,
17 how many fixtures are we taking about, what
18 the location and the size of the fixtures we
19 plan to put in, so we need to establish those
20 details if we are planning to do this
21 conceptual demonstration.

22 CHAIR MOLINA: Okay. Thank you.

23 Okay. Members, now I'd like to
24 continue with the review of the draft bill.
25 At our last meeting we were discussing

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1 Section .070, Lamp Standards.

2 The Subcommittee requested Mr. Chong
3 and Mr, Dr. Altenberg to review certain
4 matters within this section and provide the
5 Subcommittee with recommendations.

6 Mr. Chong or Dr. Altenberg, do you have
7 any recommendations that you would like to
8 share with the Subcommittee on this section?
9 We'll start first with Dr. Altenberg.

10 MEMBER ALTENBERG: I provided to the Subcommittee
11 Members my suggested revisions trying to take
12 into account the various testimony that's
13 been provided and everyone should have a copy
14 of that.

15 CHAIR MOLINA: Okay. And now just for your, for
16 the Members' information, that's, this one
17 that starts off with .070, Lamp Standards,
18 Any, any resource personnel would like to
19 request copies of that? Do all the resource
20 people have that list of recommending
21 documents?

22 ?: I have an extra one.

23 MEMBER BERNARD: Does anybody else need one?

24 CHAIR MOLINA: We have a lot of extras today.
25 That's good.

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1 Okay. Dr. Altenberg, if you'd like to
2 go ahead and give your comments to your
3 recommendations?

4 MEMBER ALTENBERG: Okay. In the very first, the
5 underlined areas are the revised text. The
6 italicized text in brackets is the
7 preexisting text.

8 So under Section A, I, I rearranged the
9 words to take into account Mr. Hanzawa's
10 comment about the, the lack of clarity of the
11 original. And similarly under Section 1,
12 trying to improve the grammar.

13 Okay. Mr. Garneau thought under
14 Section 1, A-1.A, business hours has changed
15 to hours of operation.

16 Also assembly was not clear so the
17 intent was obviously industrial or mechanical
18 assembly or repair areas, so I added that
19 under B.

20 Then under Section C, I added sports or
21 public assembly facilities. This is to take
22 into account somebody raised the issue of,
23 say, the County fair or what was that, the
24 Taste of Lahaina, and those would be under
25 the category of the public assembly. So

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1 these are areas where low pressure sodium are
2 not required.

3 And then, and then take into account
4 Mr. Chong's concern, I added Section E,
5 architectural accent lighting to explicitly
6 include that as an area where color rendition
7 is needed to preserve the effectiveness of
8 the activity.

9 And then the -- It was mentioned, Bill
10 George mentioned that the certain wattages in
11 the, under Section C and D were not actual
12 wattages available for low pressure sodium,
13 so I altered those to include the wattages
14 that are currently available, 55 watt, 90
15 watt, and then in Section C. And Section D,
16 90 watt and 135 watt.

17 And I added a clause which was an issue
18 that was raised to Section C and D, the
19 clause, unless the IESNA standards require
20 greater illumination for this usage. So that
21 would allow higher wattages if that was
22 required to meet the, the International --
23 Illuminating Engineering Society of North
24 America's recommended standards for road
25 street light illumination. That, I think,

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1 would mitigate any possibility of the County
2 being forced to use lights that were
3 providing the recommended, industrially
4 recommended illumination for roads.

5 And so that summarizes the alterations.

6 CHAIR MOLINA: Okay. Thank you, Dr. Altenberg.

7 Mr. Chong, any comments?

8 MEMBER CHONG: Other than it doesn't include high
9 pressure sodium, but we won't go there at
10 this point.

11 Paragraphs C and D, one, the IESNA is
12 not the only governing body for street
13 lighting. I mean there are, there are
14 Federal highway standards, State highway
15 standards, County standards that we need to
16 be careful. I mean the IESNA is a source
17 that many of these standards have pulled
18 from, but it's just, the IESNA is not law
19 whereas Federal highway standards and County
20 standards and State highway standards become
21 law.

22 So we need to, I think that that may
23 not be a correct way to, to allow people to
24 do what's required by listing the IESNA.
25 That's a comment. If you want your respond

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1 to that.

2 CHAIR MOLINA: Okay. Dr. Altenberg?

3 MEMBER ALTENBERG: Would you recommend then

4 inserting unless IESNA Federal or State law

5 standards, et cetera?

6 MEMBER CHONG: Something to that effect.

7 MEMBER ALTENBERG: Yeah.

8 MEMBER CHONG: Just so that we're not saying IESNA,

9 we don't -- Being an AIS member, we like to

10 think we know everything but we don't.

11 CHAIR MOLINA: Okay.

12 MEMBER CHONG: And we don't pass laws.

13 CHAIR MOLINA: Thank you Mr. Chong. That's a good

14 suggestion. The Chair would feel comfortable

15 with adding language in there that makes,

16 that addresses Federal and highway standards

17 into these recommendations, so Dr. Altenberg?

18 MEMBER ALTENBERG: Concur.

19 CHAIR MOLINA: Okay. Members, any comments to the

20 proposed recommendations from Dr. Altenberg

21 and Mr. Chong? Ms. Bernard?

22 MEMBER BERNARD: Yes. As I said last meeting, I, I

23 would feel, for the most part with one

24 exception, comfortable with these except for

25 B, industrial or mechanical assembly repair

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1 areas. And I'd, I'd just like a point of
2 clarification and an example because I could
3 see this as an potential loophole to, to let,
4 you know, some form of business expand and
5 thrive and continue to operate while others
6 are not, you know, if this were exploited
7 unfairly, which I'll ask for Lee's
8 clarification in a moment.

9 But as I said before last time, if, if
10 these -- if there's a caveat, if there's an F
11 inserted that takes into consideration sea
12 turtle nesting beaches and it's not
13 interfering, this light is not interfering
14 with the sea turtle nest, then I would be
15 okay with it.

16 CHAIR MOLINA: Okay. Mr. Maberry?

17 MEMBER MABERRY: Point of clarification perhaps.

18 Your primary concern would be like harbor
19 areas; is that what you're concerned about
20 with regards to this?

21 MEMBER BERNARD: Well, harbor areas would, would
22 be -- In terms of speaking the sea turtle
23 spokesperson on this panel, yes.

24 But in terms of speaking to the whole
25 point of, of protecting the night sky for the

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1 observatories and for potentially, you know,
2 observing a comet or an asteroid that's
3 coming for the earth, just looking at any
4 place in the middle of the island where it's,
5 say, a mill operating in the middle of the
6 night and they get an exemption and operate
7 all night long with bright lights, I don't
8 understand, I kind of feel like it's kind of
9 pointless for us to do this if we get, if
10 we're going to have a huge for exception for
11 industrial or mechanical assembly or repair
12 areas to be exempt. I don't get it. I just
13 don't get it.

14 CHAIR MOLINA: Okay.

15 MEMBER BERNARD: And I think Lee needs to address
16 it.

17 CHAIR MOLINA: Mr. Maberry, does that clarify
18 things for you?

19 All righty. Okay. We'll start with
20 Mr. Chong followed by Dr. Altenberg.

21 MEMBER CHONG: I'm not against sea turtles but I
22 don't think we should be limiting when people
23 can do business. We'd have a -- I think
24 commerce in Maui would definitely have a
25 problem with that.

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1 When we tell somebody, "Sorry, you
2 know, your job -- You knew this job's going
3 to take you 24/7 to get it down. You've got
4 to shut your lights off at ten p.m." or
5 whatever it may be, that's, that's not going
6 to go well with the business community, I
7 think. I mean that's why this exception is
8 here. We need to be sensitive to that issue.

9 CHAIR MOLINA: All right. Thank you, Mr. Chong. I
10 think that's a nice segway. I wanted to turn
11 that matter over to one of our resource
12 personnel.

13 But before we do, for the record the
14 Chair has invited the following resource
15 people: I, I don't know if we have someone
16 here from State Department of Transportation.
17 Again OSHA was invited but unable to attend.
18 We have Dr. Wainscoat from the University of
19 Hawaii. Lynne Woods from the Chamber of
20 Commerce. Terryl Vencl who's in the gallery
21 from the Maui Hotel Association. We also
22 invited the Safe Community of Maui
23 representative, Calvin Dang; Mr. Nakama here
24 from Maui Electric; Mr. Piltz is unable to
25 attend. He was invited from the commercial

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1 lighting industry; Mr. Ige from the, who
2 represented the developers' perspective on
3 this matter; we have Bill George from the
4 hotels and resorts. Also we did invite Uncle
5 Les Kulalao to give us a cultural perspective
6 on outdoor lighting. The Police Department
7 informed us that they were unable to attend
8 because they're short-handed. And we have,
9 of course, Mr. Hanzawa and Mr. Lee and Mr.
10 Nakao from the Public Works Department. The
11 Planning Department is unable to attend, and
12 we did invite Mr. Matsui from the Parks and
13 Recreation, and I don't see him. Oh, there
14 he is. Okay. And we have Kal Kobayashi, our
15 County Energy Specialist.

16 So with that, let me get comments from
17 Ms. Woods on following up on what Mr. Chong
18 reiterated to the Committee. Ms. Woods, if
19 you will?

20 MS. WOODS: Lynne Woods. Mr. Chong's really very
21 correct. There certainly are some issues
22 about telling businesses when they can
23 operate and can't operate if they have
24 24-hour shifting. Hotels have 24 hour
25 shifting so we have to be very careful about

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1 considering that.

2 It's more than perhaps what we would
3 call a mechanical assembly or repair area so
4 I think we have to pay attention to the fact
5 that there are some and a number of
6 businesses fairly close to beaches. And we
7 have to understand how we're going to address
8 that appropriately.

9 CHAIR MOLINA: Okay.

10 MS. WOODS: Thank you.

11 CHAIR MOLINA: Thank you. All righty.

12 MEMBER MABERRY: Mr --

13 CHAIR MOLINA: Okay. Mr. Maberry?

14 MEMBER MABERRY: Mr. Chair, to follow up on, on
15 Hannah's statement. Actually what this,
16 what this is is an exemption to LPS for these
17 type operations, so I'm understanding that
18 there would still be requirements for
19 shielding in order to avoid light trespass,
20 which should also protect so some extent the
21 reflection of the light into the night sky,
22 so it would be like for where you're, where
23 you're working on something outdoors, where
24 you need to be able to see, where you need to
25 have color rendition, I think. Sorry.

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1 CHAIR MOLINA: Okay, Ms. Bernard?

2 MEMBER BERNARD: Right. And like I said, if, if
3 that's the case, if we're covering it with
4 shielding, again it's just proximity to the
5 beaches that, that if we yet one more little
6 clause in there to protect the nesting
7 beaches, then that would be fine.

8 CHAIR MOLINA: Okay. Thank you. Ms. Woods?

9 MS. WOODS: Thank you --

10 CHAIR MOLINA: Your comments?

11 MS. WOODS: -- Mr. Chair. Ms. Bernard, have we
12 identified all the beaches where the turtles
13 nest? Is there a mapping of that?

14 CHAIR MOLINA: Proceed, Ms. Bernard.

15 MEMBER BERNARD: No, I don't think we've identified
16 all of the beaches where turtles nested.
17 What it seems to be the case that the more we
18 look, the more we find them. They're only,
19 they're only able to detect them by being out
20 there at night or finding the tracks early in
21 the morning, so we probably have not
22 identified all of the nesting beaches. We
23 know where some of them are but not all of
24 them. And another thing that seems to be
25 occurring is possibly new nesting sites, not

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1 new to the turtles, but new to us are showing
2 up with this particular cohort of turtles
3 that are arriving on Maui the last few years.

4 MS. WOODS: Mr. Chair, may I?

5 CHAIR MOLINA: Proceed, Ms. Woods.

6 MS. WOODS: May I make one more point please? I
7 think as we move through this, It would be
8 really a very important thing for us to do is
9 to identify where major nesting areas are and
10 those that may be coming to our attention. I
11 think that's going to be an important
12 resource for us. Thank you.

13 CHAIR MOLINA: Ms. Bernard, can you get that
14 information to us by the next meeting if
15 possible?

16 MEMBER BERNARD: I can give it to you now if you
17 want but it's not going to be on a map. I
18 mean, but the point is -- I guess what I'd
19 like to say to that is we could, we could
20 tell you where the nesting beaches are now
21 that we know now, but what, what relevance
22 does that have in terms of if we protect more
23 beaches we might see other places where
24 turtles are nesting.

25 CHAIR MOLINA: Okay. Thank you. Okay. I had Mr.

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1 Lee who wanted to make a comment to be
2 followed by Mr. Maberry and Dr. Altenberg.

3 MR. LEE: Yes. Lloyd Lee from Public Works.

4 I just want to note that we do have
5 night construction as far as projects and we
6 do have lighting at night which is your light
7 banks. So an exception, I guess, would be
8 that, you know, we would, we would need to
9 have that exception for our construction
10 projects.

11 CHAIR MOLINA: Okay. Thank you, Mr. Lee. Mr.
12 Maberry?

13 MEMBER MABERRY: My comment was simply that we have
14 to be careful about saying, I, I believe we
15 have to be careful about saying where nesting
16 areas are because before people, they were
17 nesting anywhere they wanted to. So I mean I
18 think we have to just be a little careful
19 about that.

20 CHAIR MOLINA: Okay. Thank you, Mr. Maberry. Dr.
21 Altenberg to be followed by Ms. Woods.

22 MEMBER ALTENBERG: A question on the turtles. Is
23 there any estimate of what the population,
24 the turtle population was at in the past
25 compared to what it is today, being that in

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1 the present they were endangered and today
2 they are?

3 CHAIR MOLINA: Okay. Ms. Bernard, can you respond?

4 MEMBER BERNARD: I don't know what the, the
5 pre-exploitation population was for greens
6 and certainly not for hoxbills. For hoxbills
7 we've just, every year we're getting new
8 information about where they are that, that
9 was a species that was just not studied by
10 the Federal agencies mandated with assessing
11 the population levels until very recent, last
12 six years.

13 And we have maybe 15 nesting females in
14 the whole Hawaiian archipelago. Hoxbills are
15 critically endangered in Hawaii. The green
16 sea turtles are considered threatened so
17 they're a step up from endangered and they've
18 been protected since the '70s and their,
19 their population is definitely on the rise
20 and on the increase. There may be as many as
21 800 nesting females. And most of those nests
22 are in the French Frigate Shoals, but what we
23 are seeing is perhaps as that population is
24 increasing back to its pre-exploitation
25 levels, more areas are being utilized that,

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1 that we didn't know about because we weren't
2 here to look.

3 CHAIR MOLINA: Okay. Thank you, Ms. Bernard. Ms.
4 Woods? Oh, okay. Your question was answered
5 by Ms. Bernard. All right. Okay.
6 Vice-Chair Tavares?

7 VICE-CHAIR TAVARES: Yes, can we address Mr. Lee's
8 concern about the construction sites that are
9 operated at night? Would that fall under a
10 repair area --

11 CHAIR MOLINA: Okay. Mr. --

12 VICE-CHAIR TAVARES: -- in this, in this proposal,
13 B, Section B.

14 CHAIR MOLINA: All righty. I'm trying to think who
15 would be the appropriate person to ask. I
16 guess Dr. Altenberg.

17 MEMBER ALTENBERG: I mean we can simply say
18 industrial or mechanical assembly or repair
19 and construction areas so that construction
20 is explicitly included as something if -- But
21 maybe, perhaps I should ask first Mr. Lee how
22 important color rendition is in construction
23 work.

24 CHAIR MOLINA: Okay. Mr. Lee?

25 MR. LEE: It is because you have various color

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1 codes they use for certain type of piping and
2 other things and it's critical.

3 MEMBER ALTENBERG: So I, I would support explicitly
4 including construction in that line B.

5 VICE-CHAIR TAVARES: Okay. So we could do like a
6 slash repair slash construction areas?

7 CHAIR MOLINA: Doctor?

8 MEMBER ALTENBERG: I've always wondered is there,
9 what's the legal status of the slash?

10 CHAIR MOLINA: Maybe --

11 VICE-CHAIR TAVARES: It's like either or.

12 CHAIR MOLINA: Well, let's ask our Corporation
13 Counsel, Mr. Garneau, with regards language,
14 semantics.

15 MR. GARNEAU: I, I actually was going to point to
16 another section. I know we're not
17 considering it now, but is that the type of
18 lighting, the lighting for roadway projects
19 or, you know, night construction or emergency
20 road, but then we might want to put in the
21 general exemptions section. Because there's,
22 you know, there's an earlier section, .050,
23 that has general exemptions. So this, this
24 may be the type of thing that we want to just
25 exempt entirely and allow the Public Works

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1 Department to, you know, to determine the
2 lighting that's necessary.

3 I can envision that Public Works has a
4 lot more than construction. Any time there's
5 any emergency, they respond. So I would
6 think they would want to give them the choice
7 as to what lighting's necessary in an
8 emergency situation as well as the normal
9 nighttime construction activities, so it
10 could be included in .050 or we could draft
11 some sort of language, I guess, in .070 to
12 give an exception to.

13 CHAIR MOLINA: Okay.

14 MR. GARNEAU: I, I would think it logically belongs
15 in .050.

16 VICE-CHAIR TAVARES: Right. I would think so too
17 because the section we're dealing with has to
18 do with color rendition and if there's, you
19 know, there's more things in color rendition
20 that Public Works would be doing at night
21 like emergency repairs or something like
22 that. So maybe it is more appropriate in
23 .050 instead of in this section.

24 CHAIR MOLINA: Okay.

25 VICE-CHAIR TAVARES: Thank you.

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1 CHAIR MOLINA: We have Dr. Altenberg followed by
2 Ms. Bernard.

3 MEMBER ALTENBERG: Pursuant to the idea of putting
4 construction sites as a general exemption,
5 the issue is there -- can lighting for
6 construction areas be done in such a way that
7 it is not polluting? Are there some -- some
8 of these provisions such as using fully
9 shielded lamps pointing them within, within
10 the property, that, that could be done to
11 minimize light pollution coming from
12 construction areas or is it something that
13 simply needs to be completely uncontrolled to
14 allow the effective activity to occur?

15 If, if there are some kinds of -- I
16 mean if construction area lighting can be
17 done in a way that minimizes pollution, light
18 pollution and trespass, it seems like it
19 should not be completely exempted from the,
20 from the bill, but some more specific kinds
21 of latitude be granted.

22 Perhaps Mr. Lee or any of the other
23 resource people could address that question.

24 CHAIR MOLINA: Okay. Mr. Lee?

25 MR. LEE: In relation to -- Lloyd Lee, Public

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1 Works. In relation to what you're saying,
2 depends what operation is going at night. If
3 you're doing pipeline work and stuff like
4 this, it's like spot improvements, or you do
5 paving at night, you need to light up the
6 roadway in a sense of long, long line of
7 lights per se, so you cannot really say
8 you're going to limit that for a spotlight
9 type of thing or, you know, shielded lights
10 because it's, it's a light bank, it's a
11 portable light bank that they set up and it's
12 extendable and they have like maybe five,
13 six, eight they do at night for paving
14 operations, so we need to look at the
15 pavement, we need to watch the equipment as
16 far as the street and everything else, so
17 light is critical as far as, you know, night
18 work. So it wouldn't be -- It's kind of hard
19 to say, "Well, you know, put a shield on it
20 and do only 50 feet at a time or 100 feet at
21 a time." You know, you really hamper
22 operations.

23 CHAIR MOLINA: Okay. All right. Ms. Bernard?

24 MEMBER BERNARD: In 1997 we had a team of
25 researchers down at the beach at Kealia

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1 watching over a nesting hoxbill female and
2 they were watching her get ready to come
3 ashore, she was in the, in the surge and she
4 was getting ready to come ashore presumably
5 to nest. And the lights went on for the
6 construction of the Maaleia triangle about a
7 quarter of a mile away. And her response was
8 immediate and dramatic. She, she indicated
9 aversion, you know, looked at the light,
10 turned around and went back in the water.

11 And so the researchers approached the
12 construction site and talked to them about
13 the situation and talked to the -- We
14 actually talked with the owner of Maaleai
15 triangle and the owner of the Maui Ocean
16 Center, and we were met with, with complete
17 receptivity from the owner of the Maui Ocean
18 Center to do whatever it took to reduce the
19 lighting during the time of the nesting or to
20 assist in any way.

21 So again, it's -- I understand that
22 certainly with construction you'll need to
23 see what you need to see, but is there not a
24 way -- I mean certainly we know that folks at
25 the construction site were willing to

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1 cooperate, and, and people do care and they
2 do want to help so is there not a way for us
3 to write that in so that you can make
4 adjustments and it's not just, "Well, it's
5 not in the law so I don't have to comply?"

6 CHAIR MOLINA: Okay. Any resource people want to
7 comment on that at this time? If not, we
8 can, you know, check with -- It would have
9 been, if we had Mr. Ige from the developers'
10 perspective, maybe they could give us a
11 comment on that. We can -- Maybe Gary can
12 take that question and research it little bit
13 more so we can get a response to that. Okay.
14 Mr. Lee?

15 MR. LEE: Fast response. Right now the only areas
16 I think that might affect the beach fronts
17 are Honoapiilani Highway, (_____) Highway by
18 Napili area. That's the only area we have
19 remaining as far as close to the oceanside.

20 The only other roadway area you have
21 close to the oceanside would South Kihei
22 Road.

23 MEMBER BERNARD: North Kihei Road.

24 MR. LEE: Well, North Kihei Road is down the road
25 so that's not in our jurisdiction. But as

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1 far as for County projects, that's the only
2 two projects that possibly would work at
3 night that might affect the beach areas, so
4 that's the only two remaining areas that I
5 would think that would be a concern as far as
6 turtles as far as night work.

7 CHAIR MOLINA: Okay. Thank you, Mr. Lee. Mr.
8 Maberry, you had your hand up earlier?

9 MEMBER MABERRY: Mr. Lee, just aren't the lights
10 that you, that you use for this type of
11 construction pretty much directional anyhow?
12 I mean you have a limited number of these
13 banks and you want to get the light from
14 these banks in the area where you can use it.
15 Aren't they fairly directional?

16 MR. LEE: Yes.

17 MEMBER MABERRY: And it's --

18 MR. LEE: But --

19 MEMBER MABERRY: It's not like you're not on the
20 same part of the island all the time, I mean
21 your, your projects move around, correct?

22 MR. LEE: Yes, but that, that's what I'm saying.
23 Right now we're at Front Street, before we
24 had night lights. That's all done already,
25 that road. Hoopiilani Highway, the

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1 Hoopiilani Highway is the only area remaining
2 by Napili. It's the last section we have.
3 And South Kihei Road, of course, from Azeka's
4 all the way up to (_____) is our next
5 sections that we have to do but that's the
6 only other areas I would think night lights
7 might affect, but it is directional, yes.

8 MEMBER MABERRY: Thank you.

9 CHAIR MOLINA: Okay. Thank you, Mr. Maberry.

10 MEMBER MABERRY: Thank you.

11 CHAIR MOLINA: All right. If there's no other
12 questions on this matter at this time the
13 Chair would like to, I guess, ask for
14 consensus of the recommendations made by Dr.
15 Altenberg and also to take into consideration
16 revisions that have been proposed here.

17 I'd like to ask the Legislative Analyst
18 Gary, Gary Saldana, to give us a list of the
19 proposed recommendations or revisions to the
20 recommendation made by Dr. Altenberg for the
21 committees to consider.

22 MEMBER CHONG: Excuse me, Chair?

23 CHAIR MOLINA: Oh, excuse me. Let me let Mr.
24 Saldana first and then I'll come back to you
25 and then Dr. Wainscoat.

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1 MR. SALDANA: Okay. Thank you, Mr. Chair. The,
2 basically the only revisions I, I've noted
3 that would be to Section .070, and that's
4 assuming that the discussion regarding
5 construction and exempting construction
6 activity which would go to Section .050 are
7 the corrections made to C and D of 70 -- I'm
8 sorry, 0.070 and that would be to add
9 language in those sections that Dr. Altenberg
10 added that would include both Federal and
11 State standards.

12 Other than that, it seems like the
13 other corrections that were discussed
14 regarding the construction would be more
15 appropriate in Section .050 under the
16 exemptions.

17 CHAIR MOLINA: Okay. Thank you, Gary. Mr. Chong
18 followed by Dr. Wainscoat.

19 MEMBER CHONG: In paragraph B, I thought we had
20 discussed that we were going to ban the sale
21 of new mercury vapor luminaries but still
22 allow the sale of mercury lamps so that
23 people would not have to change their mercury
24 luminaires until they are no longer
25 functional. And I can see a major problem

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1 with that. I mean it's just we're not
2 allowing the sale of luminaires, nobody is
3 adding more luminaires to the, to the County,
4 but still allow the guy that's got one
5 floodlight that he's had up there for ten
6 years but it's still working. He can get a
7 replacement lamp when he needs to. And if
8 that's --

9 I didn't think that was too big of an
10 issue. I thought we had sort of agreed that
11 we weren't going to force, force that onto
12 people, the general public.

13 CHAIR MOLINA: Okay. Dr. Altenberg, your comment?

14 MEMBER ALTENBERG: I, I guess here is where I just
15 differ with Mr. Chong that we shouldn't keep
16 allowing the current stock of mercury vapor
17 to be, to be maintained as long as the
18 luminaires hold out, that when the light
19 bulb's out, when the mercury vapor bulb burns
20 out, that that would be the time that the
21 person would change the luminaire. So, you
22 know, I'd be happy to hear discussion but it
23 seemed that it was not a good idea to allow
24 the mercury vapor lamps that are already on
25 Maui to continue indefinitely into the future

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1 because they, they are particularly polluting
2 of the blue, of the blue part of the
3 spectrum, which is valuable to astronomy.

4 CHAIR MOLINA: Okay. Thank you, Dr. Altenberg.

5 Dr. Wainscoat to be followed by Ms. Woods.

6 MEMBER WAINSCOAT: Section A-1 subsection B, the
7 industrial and mechanical assembly or repair
8 areas, I just wanted to comment that there is
9 a quarry, and I think it's a concrete plant,
10 on the Big Island near Waimea, which is a
11 source of continuing concern for us because
12 it operates well into the night with
13 unshielded white lights and it is probably
14 the single worse light source for astronomy
15 on the Big Island.

16 Section E, the architectural accent
17 lighting, I'm quite concerned about this in
18 its present form and I'd like, I strongly
19 recommend that, that Dr. Altenberg and Mr.
20 Chong get together and talk about some limit
21 that they can both live with in lumens per
22 acre. Because I can think of places like Las
23 Vegas and the extreme case of the Luxor Hotel
24 which has a light which is arguably
25 architectural accent lighting but can be seen

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1 from the moon. And this is a huge loophole
2 unless some care is taken here.

3 CHAIR MOLINA: Okay. Well, we certainly hope we
4 don't get, reach the Las Vegas standards
5 here.

6 MEMBER WAINSCOAT: In, in Section B, I, I think I
7 made it very clear to you that we have a very
8 bad light pollution problem already on Maui,
9 so I think that any proactive action on, for
10 example, bad lights, like mercury lights is,
11 is a good thing from the astronomical
12 perspective.

13 CHAIR MOLINA: Okay. Thank you, Dr. Wainscoat.
14 Ms. Woods to be followed by Dr. Altenberg and
15 Ms. Bernard.

16 MS. WOODS: Lynne Woods referring to B again on the
17 mercury vapor lights. I have a couple
18 questions. Will you then propose banning the
19 sale of existing inventories that retailers
20 would be carrying?

21 CHAIR MOLINA: Dr. Altenberg?

22 MEMBER ALTENBERG: I would say we need think about,
23 perhaps you can get more information what the
24 state of existing stocks would be. Can those
25 be returned to the vender typically?

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1 MS. WOODS: Not typically, no.

2 MEMBER ALTENBERG: So what, how large would you say
3 those inventories were, how, how many months'
4 supply typically are held by lamp sales
5 people?

6 MS. WOODS: Mr. Chair, may I answer?

7 CHAIR MOLINA: Proceed.

8 MS. WOODS: I don't suspect that I know all that
9 answer but I can, sir, get it. But is I go
10 into my second question, I think what, where
11 I'm going with this is, A, we have, there is
12 a huge economic backlash in B here that I
13 don't think that the County can mandate
14 without reimbursement, number one.

15 And number two, you're dealing with
16 some other levels of government here that we
17 can't mandate, i.e., State; i.e. Federal in
18 some of their lands and some of their
19 lighting so I think when you make this kind
20 of recommendation, you have to take that into
21 consideration as well. Thank you, Mr. Chair.

22 CHAIR MOLINA: All right. Thank you. Dr.
23 Altenberg?

24 MEMBER ALTENBERG: As far as I know, the State,
25 neither State nor Federal governments are a

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1 source of mercury vapor lamps on Maui. Can
2 anybody address that?

3 CHAIR MOLINA: Any of our resource personnel, can
4 we give a response? If not, we can have that
5 question researched by analyst and get a
6 response back to you by our next meeting.
7 Dr. Altenberg?

8 MEMBER ALTENBERG: Maybe Rick Chong could answer
9 the question, the cost of the mercury vapor
10 luminaires versus the cost of bulbs. Do you
11 have any offhand the price ranges, what
12 fraction of the cost is in the luminaire
13 versus the bulb.

14 MEMBER CHONG: I mean a lamp is 20 bucks.

15 CHAIR MOLINA: Maybe Mr. Kumano could comment on
16 that from the Phillips perspective, I guess.

17 MR. KUMANO: Yeah. Well, for one thing I want to
18 make a comment that the mercury vapor
19 technology is so out-dated that it's pretty
20 much obsolete. I don't know of anybody
21 specifying any new mercury vapor
22 installations; am I wrong in that?

23 MEMBER CHONG: No, you're correct. And I made that
24 statement before. We, as light engineers we
25 don't use mercury vapor. I'm just trying to

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1 look out for the guys who have them already
2 on their walls.

3 MR. KUMANO: Yeah.

4 MEMBER CHONG: And in their parking lots, and, and
5 it could be a State school, not necessarily
6 the State Office Building. There's lots of
7 schools in Maui that may have mercury vapor
8 outside the door and, and the schools already
9 have a budget problem and we're going to
10 force all the schools to change their lights?
11 Again we're, I think you're forcing a lot of
12 cost onto people and the County will have to
13 answer to that.

14 CHAIR MOLINA: Okay. Dr. Altenberg?

15 MEMBER ALTENBERG: Question.

16 CHAIR MOLINA: Dr. Altenberg and then --

17 MEMBER ALTENBERG: Are there --

18 CHAIR MOLINA: -- Mr. Kumano.

19 MEMBER ALTENBERG: Are these luminaires, they can
20 only take mercury vapor or is there anything
21 else that can fit into those luminaires?

22 CHAIR MOLINA: Mr. Kumano?

23 MR. KUMANO: With certain wattages you can put in a
24 metal halide lamp, but as far as putting in a
25 low pressure sodium into that same fixture,

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1 you cannot.

2 What I was going to say is typically
3 from what I can see and, and the, and the
4 people that we sell or quote prices to on
5 mercury vapor lamps, a lot of it is
6 government, military where their
7 specifications don't change a whole heck of a
8 lot over the past 10, 20 years and sometimes
9 they're still using mercury vapor or any kind
10 of old technologies. Even some of their
11 specifications as far as ANSI, meeting ANSI
12 or American National Standard for -- Standard
13 for Institutes, something like that. As far
14 as meeting those specs, they have outdated
15 specs too. So from what I can tell, a lot of
16 mercury vapor is going into Federal
17 government installations.

18 As far as cost, you were concerned with
19 cost on, on the lamp versus the fixture, if
20 you go to some place like Home Depot, they've
21 got those dust to dawn mercury vapor fixtures
22 that are dirt cheap. The lamps being
23 manufactured, we discussed this recently at a
24 meeting, a national sales meeting where we've
25 seen prices or lamps, mercury vapor lamps

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1 coming from offshore, typically China and
2 Korea, which are dirt cheap. We couldn't
3 even, you know, match it. We wouldn't even
4 attempt to try to match their pricing, so --
5 Pricing is cheap. And maybe what might
6 be a suggestion is to if you want to phase it
7 out, I'd say phase it out over time. And
8 that way, it's no big expense to someone who
9 maybe just put in a fixture recently or those
10 who have a supply of extra fixtures. Maybe
11 set a timetable where they can over time
12 eliminate the mercury vapor lamps.

13 CHAIR MOLINA: Okay. Thank you, Mr. Kumano. We
14 had, our analyst, Mr. Saldana, would like to
15 make a comment.

16 MR. SALDANA: In, in relation to what Mr. Kumano
17 just said, if you would reference the, the
18 County of Hawaii bill, it's in your, it's in
19 your binder under a memo dated January 22nd.
20 There's a specific section in there that
21 addresses mercury vapor lamps and it also
22 states in there that, that all existing
23 mercury vapor outdoor lighting fixtures shall
24 be removed within ten years or the effective
25 date of this ordinance, of the effective date

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1 of this ordinance. So they, they are looking
2 at phasing it out over a period of time as
3 what Mr. Kumano had suggested.

4 CHAIR MOLINA: Okay. Thank you, Mr. Saldana.

5 Okay. I know we had Ms. Bernard
6 waiting in the wings.

7 Dr. Wainscoat, is your response --
8 you're responding to Mr. Saldana? Okay.

9 I'll permit that. Go ahead.

10 MEMBER WAINSCOAT: With reference to the Big Island
11 lighting ordinance on mercury lights,
12 although mercury lights are, you're not
13 permitted to use them, there's nothing in
14 this ordinance that says you're not allowed
15 to sell them, and that's a big mistake in the
16 ordinance, so they have shown up in Costco on
17 the Big Island.

18 CHAIR MOLINA: Okay. Thank you, Dr. Wainscoat. We
19 have Ms. Bernard to be followed by Mr.

20 Maberry.

21 MEMBER BERNARD: I'd just like to add once again
22 that mercury vapor lighting is considered
23 extremely disruptive for sea turtles.

24 And it seems like we, we were sort of
25 focusing on B, industrial mechanical assembly

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1 repair areas and what, I, just for some of
2 the resource folks that may not have been
3 here last time, one of the things that we
4 made clear last meeting was the shielding is
5 addressed in another section so let me just
6 clarify: If, if we have the shielding in
7 place over, say, for instance this quarry on
8 the Big Island, if, if the shielding were in
9 place, would that take care of the problem?

10 CHAIR MOLINA: Dr. Wainscoat?

11 MEMBER WAINSCOAT: Richard Wainscoat. The, the
12 shielding will only take care of the part of
13 the light that goes directly from the lamp to
14 the sky. The shielding cannot do anything
15 about reflection of the, the light from the
16 ground, which is probably 30 percent of the
17 light.

18 MEMBER BERNARD: Thank you.

19 CHAIR MOLINA: Thank you, Ms. Bernard.

20 If you'll hold on for just a second,
21 Mr. Maberry, Mr. George, you had a -- I
22 thought I saw your hand up earlier. Go
23 ahead. I'll permit you and then Mr. Maberry,
24 if you don't mind.

25 MR. GEORGE: Yes, Bill George. Going back to that

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1 architectural accent lighting, that E that
2 Dr. Altenberg was thinking about putting in,
3 my recollection is that we were already
4 saying there was no uplighting at all in
5 this, in the luminaire section. There is no
6 uplighting at all so all we're doing by
7 adding this E here is saying that you can
8 have a greater than 1800 lumens bulb facing
9 downward.

10 CHAIR MOLINA: Okay. Mr. Maberry?

11 MEMBER MABERRY: Yes, Mr. Chair. I'm sorry it took
12 me a minute but back to the mercury vapor
13 situation, I wanted to find an ad that I knew
14 I had. And if I'm not mistaken that you said
15 that the cost of replacement bulbs was in the
16 neighborhood of \$20?

17 MEMBER CHONG: That was my guess. I haven't, I
18 haven't bought a mercury vapor lamp in my
19 lifetime.

20 MEMBER MABERRY: Okay. Yes, sir. I'm not the
21 Chair but go ahead.

22 MR. GEORGE: To respond to that, the prices are all
23 over the place. It can go anywhere from \$8
24 up to over \$100. It depends on the type.

25 MEMBER MABERRY: I understand. Okay. Sir, if I

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1 may, the typical kind that I'm familiar with
2 that I see sold in the local stores, the
3 luminaire and bulb, the whole nine yards is
4 like \$18.88, so I mean I think we're, we're
5 really kind of beating this at a small level
6 as far as the impact on someone to replace
7 the luminaire versus replacing just the bulb.

8 CHAIR MOLINA: Okay. Mr. George?

9 MR. GEORGE: Bill George. In direct response, it's
10 not only the cost of the fixture, it's the
11 guy that has to come out that has to replace
12 that fixture.

13 As an example, any time I send a guy
14 out to replace a \$20 bulb, it could cost up
15 to \$100 just labor time, set up. Any time my
16 guy goes over a six foot height in, in a
17 ladder, he's got to wear a safety harness
18 because of OSHA. So you're talking about all
19 these other things: It's the labor that it
20 takes and it's the cost.

21 So if I'm a small retailer owner in
22 Kahului Shopping Center and I have to replace
23 a mercury vapor light that's outside that's
24 been there for ten years, you know, \$18 bulb
25 versus, you know, 100 or \$200 to have the guy

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1 replace the fixture because of the labor, by
2 the time he comes out and all of that. It's
3 a big expense. Thank you.

4 CHAIR MOLINA: Okay. Ms. Bernard followed by Dr.
5 Altenberg.

6 MEMBER BERNARD: I think we've, we've touched on
7 that issue before and, and the way that we
8 had addressed it was, you know, this, this
9 would be handled when the lights went out so
10 you would already have had to pay for that
11 labor anyway if we didn't require the
12 replacement before they went out.

13 MR. GEORGE: Bill George. Replacing a bulb is a
14 lot cheaper than to replace the whole fixture
15 labor-wise. All I'm saying is the bulb, you
16 open a screw, you put the bulb back in,
17 you're gone. I can do that.

18 But to replace the fixture, you're
19 going to get a electrician. He has to come,
20 take that old one off, put it in his truck,
21 put the new one back in. He's got to go the
22 time to buy it. That's all I'm saying is
23 there's a difference between replacing a bulb
24 and replacing a luminaire.

25 CHAIR MOLINA: Okay. All right. We have Dr.

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1 Altenberg and after Dr. Altenberg's question,
2 the Chair would like to take a break.

3 Okay. Proceed, Dr. Altenberg.

4 MEMBER ALTENBERG: Dr. Wainscoat had raised the
5 issue, the concern about architectural accent
6 lighting be a loophole exempting it from the
7 low pressure sodium requirement.

8 Well, it seems to me that low pressure
9 sodium lamps do not make good architectural
10 accent lighting and so that where
11 architectural accent lighting is permitted,
12 it should not be required to be low pressure
13 sodium.

14 So the question is can your concerns be
15 met by shielding requirements? You had
16 mentioned a lumen, some kind of a lumen cap.
17 Would you suggest that there be an allocation
18 in terms of the total number of lumens of,
19 say, non-low pressure sodium lighting that
20 can be used in a facility or in architectural
21 accent lighting?

22 CHAIR MOLINA: Dr. Wainscoat?

23 MEMBER WAINSCOAT: I'd have to do some calculations
24 to look at what that number is, but a cap
25 would be something that would make me a lot

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1 happier.

2 A philosophical approach to this might
3 be that one would hope that a visitor to this
4 island has no more impact than a resident in
5 terms of damaging the night sky, and so if
6 you can come up with some figures that, that
7 conform with that, that also allow the
8 buildings and the trees to be adequately lit
9 to, to what you want, to what the resorts
10 want to do, then probably everyone is going
11 to be happy.

12 CHAIR MOLINA: Okay. Thank you, Dr. Wainscoat. At
13 this point the Chair would like to take a --
14 Oh, Dr. Altenberg, follow up?

15 MEMBER ALTENBERG: Just one other to follow up on
16 the issue that some luminaires -- mercury
17 vapor lumens cannot, do not have any other
18 kind of replacement bulbs. Is it possible to
19 describe that category so that they could be
20 explicitly exempted? So in other words, you
21 could sell mercury vapor lamps only for those
22 categories of luminaires that could not be
23 retrofit with any other kind of bulb?

24 CHAIR MOLINA: Maybe language, I guess, inserted in
25 to maybe -- Would you like a comment from the

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1 Corporation Counsel?

2 MEMBER ALTENBERG: Well, this would be from the

3 technical --

4 CHAIR MOLINA: Technical.

5 MEMBER ALTENBERG: The two lighting people here.

6 CHAIR MOLINA: Okay.

7 MEMBER ALTENBERG: It sounds like there are some

8 mercury vapor luminaires that cannot be

9 retrofit with any other bulb, can you

10 describe those?

11 CHAIR MOLINA: I guess maybe Mr. Nakama or Mr.

12 Kumano, any comments, or even Public Works?

13 Mr. Kumano?

14 MR. KUMANO: Dexter Kumano. I'm sorry. I don't

15 really quite understand the question.

16 MEMBER ALTENBERG: Well, I think you had said that

17 there are some wattages where the, where

18 there's only -- you can replace, there's only

19 maker vapor lamps available for the

20 luminaire, so I'm wondering can you describe

21 that or, or is it depends on each particular

22 luminaire to know whether any retrofit bulbs

23 can be used that are not mercury vapor?

24 MR. KUMANO: I think it more depends on the

25 wattage. I believe there are three wattages

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1 and for some reason the 175 watt comes to
2 mind. That, I believe, is retrofittable to
3 use in metal halide lamp only, but they give
4 off similar light as far as the color of the
5 light, so I don't know what that would solve
6 really.

7 MEMBER ALTENBERG: I'm just trying to find out
8 what, what are the kinds of luminaires that
9 can only take mercury vapor lamps and is
10 there a way to describe them so that if you
11 were to permit the sale of mercury vapor
12 lamps, it would be only for those luminaires
13 that can take no other lamp?

14 MR. KUMANO: You --

15 CHAIR MOLINA: Okay. Mr. Chong, you would like to
16 comment on that?

17 MEMBER CHONG: The only people who are buying
18 mercury vapor lamps are those that have
19 mercury vapor luminaires. Nobody is ever
20 going to buy a mercury vapor lamp to put into
21 a metal halide luminaire. It doesn't work
22 the other way around. And especially won't
23 do it for high pressure sodium lamp,
24 luminaire or low pressure sodium luminaire.
25 So they make these retrofits for metal

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1 halide lamps to go into mercury vapor
2 luminaires because people don't like the
3 mercury vapor color and they want better
4 color rendition but they don't want to buy an
5 entire new luminaire, so the lighting
6 industry again because of, because of the
7 market have come up with these retrofit lamps
8 that you can just buy a metal halide lamp and
9 screw it right into the mercury vapor
10 luminaire without changing the ballast or
11 taking it down and rewiring it, so, you know,
12 if we -- I mean if that answers your
13 question, Dr. Altenberg.

14 CHAIR MOLINA: Dr. Altenberg?

15 MEMBER ALTENBERG: If such lamps exist, then I
16 don't see why we need to, to allow the sale
17 of mercury vapor if metal halide lamps exist
18 that can go into those mercury vapor
19 luminaires.

20 MEMBER CHONG: It's a limited range.

21 CHAIR MOLINA: Okay. Mr --

22 MEMBER CHONG: You won't be able to buy for every
23 single lamp that they make.

24 CHAIR MOLINA: Okay. Mr. Kumano would like to make
25 comments on that. Go ahead.

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1 MR. KUMANO: These metal halide lamps that can
2 screw into the mercury vapor fixtures were
3 not made to be a retrofit; they just so
4 happen that they can run off the same
5 ballast.

6 CHAIR MOLINA: Okay. Dr. Altenberg, is that it?

7 MEMBER ALTENBERG: So you said it's a limited range
8 so can that limit be described?

9 CHAIR MOLINA: Gentlemen? Okay. Mr. Kumano?

10 MR. KUMANO: I believe it was within three
11 different wattages. Like I said, I think
12 it's in -- I think maybe 175 watt might be on
13 the top end and then lower. I, I could check
14 that out.

15 CHAIR MOLINA: Okay. Okay. Members, the Chair
16 would like to take a break right now. We can
17 discuss these items during the recess for
18 those of you who have specific concerns.
19 Let's reconvene at 11:35. (Gavel.)

20 RECESS: 11:24 a.m.

21 RECONVENE: 11:35 a.m.

22 CHAIR MOLINA: (Gavel.) The Outdoor Lighting
23 Standards Subcommittee is now back in session
24 for February 20th.

25 Members, we seem to be making some

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1 progress, which I think is very positive in
2 certain areas although we've still got a lot
3 of work to do.

4 Okay. At this point I'm somewhat
5 getting a feeling that A, C and D, we have
6 some movement there. Ms. Bernard brought up
7 her concerns with regards to the nesting. I
8 think that could be addressed in another
9 section in which we may be able to add some
10 language to or strengthen the existing
11 language.

12 I think we need to resolve or find some
13 type of compromised solution for section B,
14 and my suggestion to maybe Dr. Altenberg and
15 Mr. Chong, if you two can get together again
16 and come up with a solution for the Committee
17 to consider. And by the way, the Chair
18 appreciates Dr. Altenberg and Mr. Chong for
19 getting together on our previous issue and
20 thank you for coming up with these
21 suggestions that we're working on today for
22 A, C and D.

23 So that is my take on this. I'd like
24 to see if you guys two can get together or if
25 you'd like to go ahead and hash this out

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1 today but we are somewhat limited on time.

2 Comments or questions at this time

3 Members? We'll go with -- Okay. Start with

4 our Resource Person Mr. George followed by

5 Mr. Hanzawa.

6 MR. GEORGE: Yes, Bill George. Before the break I

7 mentioned about E, the architect accent

8 lighting and I never got an answer. I just

9 wanted to know in other areas of this

10 ordinance, it says that there will be no

11 uplighting. This architectural accent

12 lighting, is it all going to be only

13 downlighting? That's my question.

14 CHAIR MOLINA: Okay. And Mr. Maberry, you'd like

15 to respond.

16 MEMBER MABERRY: We're only dealing with low

17 pressure sodium vapor lights exemptions in

18 this section. I think we should deal with

19 your concerns when we reach those other

20 sections.

21 I think what it's saying right here is

22 that it will allow you for architectural

23 accent lighting to use something other than

24 low pressure sodium, and I think that's the

25 issue that we're addressing here.

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1 MR. GEORGE: Bill George. I understand that. Is
2 it allowing the uplighting?

3 MEMBER MABERRY: It is allowing any architectural
4 accent lighting that is accepted. And when
5 you, when we deal with the uplighting issue
6 in the other section, I guess that's how we
7 address your, your question.

8 CHAIR MOLINA: Mr. George?

9 MR. GEORGE: Bill George. Okay. So as I
10 understand that, that E is going to allow me
11 to use a lamp that is not LPS, it's greater
12 than 1800 to accent a tree, a building, et
13 cetera?

14 CHAIR MOLINA: Mr. Chong?

15 MEMBER CHONG: Yes, but we need to consider, like
16 Mike Maberry said, the later sections in the
17 code also that specifically talk about
18 shielding or non-shielding given certain
19 lumen outputs, and we'll get to that
20 discussion I'm sure one of these days.

21 CHAIR MOLINA: So in other words, we'll cross that
22 bridge when we get to it.

23 MR. GEORGE: Well, that's what I'm trying to refer
24 to is if, if just putting this terminology in
25 here and we're not allowing it any place

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1 else, that's, that doesn't make sense.

2 CHAIR MOLINA: Dr. Altenberg?

3 MEMBER ALTENBERG: Well, this section is just
4 dealing with lamps. What kind of lamp can
5 you, can you employ, and it's saying that in
6 the case of architectural accent lighting,
7 you can employ other than low pressure sodium
8 lamps that are greater than 1800 lumens.

9 So the issue of shielding is in Section
10 0 -- in the luminaire standards, Section
11 .080, so when we get to that, that seems like
12 that will be the appropriate place to
13 consider the other issues, but this is just
14 saying what kind of bulb can you go out and
15 put into this fixture usage?

16 MR. GEORGE: Bill George. Well, that's what I'm
17 trying to get at, okay? If we're saying this
18 is an exception, that we can do architectural
19 accent lighting but yet in other sections
20 throughout it and also previous to this, in
21 .050, we're saying we can't have it, that we
22 have to have a cover and it can only go below
23 the plain, the horizontal plain.

24 CHAIR MOLINA: Okay. Before we proceed any further
25 with this discussion, the Committee is in

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1 consensus of Sections A, C and D. And I did
2 mention earlier that I would like to at least
3 touch upon Section 8 where, you know, some of
4 Mr. George's concerns could be addressed
5 there, so if we could just somewhat move on
6 there and then take Mr. George's concerns
7 into heart at that time, okay?

8 So Members, again Section B, I'd like
9 Mr. Chong and Mr. Altenberg to work on
10 finding a compromise or solution to that and
11 bring that to us at our next meeting.

12 And again the concerns that Ms. Bernard
13 had can be addressed in another section which
14 relates to wildlife and nesting and so forth.

15 So let us move on to Section .080 at
16 this time, and at the last meeting both Mr.
17 Chong and Mr. George provided the Members
18 with recommendations for this section. And
19 I'd like to ask Mr. Chong and Mr. George to
20 again review their suggestions prior to any
21 further discussions on this section.

22 So I leave it up to you two gentleman.
23 Who would like to take the lead? Maybe we
24 can -- Okay. Mr. Chong you will yield to Mr.
25 George. Proceed.

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1 MR. GEORGE: So we're going to go over the whole
2 list that we had the last time on .08?

3 CHAIR MOLINA: Well, I know we're somewhat limited
4 on time. We'll try and cover as much as we
5 can.

6 MEMBER BERNARD: On .080.A.1, I was just wondering
7 where does that 260 lumen per fixture number
8 come from, will this light be effective in
9 risk management situations? So I know you're
10 kind of adverse to foot candles but I'm
11 talking about what is the surface, the
12 lighting at the surface of this walkway is
13 going to be? In other words, you could have
14 260 lumens and if it's not getting to that
15 walkway surface, you're going to have a
16 dangerous surface, so that's what I'm basing
17 that question on.

18 CHAIR MOLINA: Okay. Mr. Altenberg?

19 MEMBER ALTENBERG: This says -- This, the current
20 text of the proposed draft allows you to use
21 more than 260 lumens, allows you to use
22 whatever lumens you want to light up your
23 walkway, but if it's 260 lumens you have to
24 have at least partial shielding on it. And
25 if it's over what the upper, then it shifts

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1 to full shielding if the lamp is over, I
2 don't have that, was that 800, 900 lumens,
3 excuse me?

4 So this is saying that if you have, if
5 you're going to use 260 lumen or less lamps
6 in a fixture, then you don't require the, the
7 partial shielding.

8 CHAIR MOLINA: Okay. Thank you. Mr. George, if
9 you want to continue?

10 MR. GEORGE: Yes. Well, I'm still questioning that
11 one because if I look at it it's saying
12 luminaires that have a maximum output of 260
13 lumens per fixture, the approximate output of
14 120 watt incandescent bulb regardless of the
15 number of bulbs may be left unshielded
16 provided the fixture has an opaque top.

17 So if you have an opaque top and to
18 keep light from shining directly upward and
19 you're still above the, below the horizontal
20 plain, it's okay but you're not having
21 anything go above it; is that correct the way
22 it reads?

23 CHAIR MOLINA: Dr. Altenberg?

24 MEMBER ALTENBERG: Actually if you have an opaque
25 top, that will allow some uplight, okay?

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1 Because the vertical thickness of the bulb
2 emitting surface allows some uplight to go
3 past the opaque top, but this will prevent a
4 large fraction of that light from going
5 straight up. Is that clear?

6 MR. GEORGE: I understand it. Where do we get this
7 260 lumens from that I --

8 MEMBER ALTENBERG: That's from the recommendations
9 of the International Dark Sky association in
10 their model outdoor lighting standards
11 ordinance.

12 CHAIR MOLINA: Okay.

13 MR. GEORGE: Did they come up -- Bill George, I'm
14 sorry. Did they come up with the model
15 ordinance that I didn't get a copy of?

16 MEMBER ALTENBERG: It's available on their web
17 site. I don't know yet if it yet has been
18 introduced into our public record.

19 CHAIR MOLINA: Okay. All righty. Mr. George,
20 we'll try and maybe, maybe staff, we can get
21 some, give Mr. George some assistance there
22 to get a copy of this, maybe find the web
23 site, I guess.

24 Okay. Mr. George, if you want to --

25 MR. GEORGE: Yes.

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1 CHAIR MOLINA: -- continue with --

2 MR. GEORGE: -- going on to the second section,
3 it's A, .080.A.2, where does the 1,000 lumen
4 per fixture number come from, is that the
5 same as the A, Dark Skies?

6 CHAIR MOLINA: Dr. Altenberg?

7 MEMBER ALTENBERG: I'm sorry. Could you say that
8 again?

9 CHAIR MOLINA: Okay. Mr. George?

10 MR. GEORGE: Yes, Bill George. The paragraph
11 number 2, it says luminaires 1,000 lumens.
12 Is that from the Dark Skies also?

13 MEMBER ALTENBERG: Yes.

14 CHAIR MOLINA: Dr. Altenberg, everything that
15 you've taken here in .080 is all from the
16 Dark Skies --

17 MEMBER ALTENBERG: Yes.

18 CHAIR MOLINA: -- recommendations? All righty.
19 Mr. George, continue.

20 MR. GEORGE: Under number 3, I recommend that we
21 put motion in front of sensor. We had sensor
22 activated. It would be motion sensor
23 activated to make it a little clearer.

24 And also under that sentence, instead
25 of direct glare just put glare. That's due

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1 to the definitions. Glare means some kind of
2 direct light in your eyes.

3 CHAIR MOLINA: Okay. Dr. Altenberg or Mr. Maberry,
4 any comments?

5 MEMBER ALTENBERG: I support those.

6 CHAIR MOLINA: Okay. All right. Thank you. Mr.
7 George?

8 MR. GEORGE: The next thing I put down was
9 businesses often light public right of way
10 areas where risk management, life, safety or
11 security is of concern adjacent to the
12 property. If we discontinue this community
13 helping sidewalks that are owned by the
14 County or requested by the County, who's
15 going to assume the liability if the lighting
16 changes and gets darker?

17 CHAIR MOLINA: Maybe Dr. Altenberg or is it more
18 appropriate for the Corporation Counsel to
19 respond to that? Maybe Mr. George, if you'd
20 like to restate your concern to Mr. Garneau?

21 MR. GEORGE: If, if a private property is helping
22 light a public area as a park or a sidewalk
23 that enters onto their property and we have,
24 we're required by this to turn off those
25 lights, who is going to be assume any

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1 problems that happen on that public property
2 or area that comes through your private
3 property?

4 MR. GARNEAU: Well, I think that's something that
5 we are going to have to discuss in terms of
6 this Committee because right now with beach
7 access, is that what you're talking about
8 where you have private beach access that is
9 required?

10 Well, for most of those, the County is
11 not maintaining them and so that the, there's
12 oftentimes indemnity agreements between the
13 private landowner to, to, you know, maintain
14 it and keep it open for public use.

15 So depending on how this may impact
16 either individual private landowners if they
17 are responsible under their indemnity
18 provisions or if the County has a provision
19 where we've assumed the responsibility to
20 take care of that area, then it would also
21 create a liability for the County.

22 So I don't have a short answer for you
23 but I think we could look at places where
24 that could be impacted and, to see what type
25 of indemnity agreements are available or who

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1 currently has the responsibility because
2 lighting is definitely an issue.

3 We, we don't want to create a situation
4 where we change the lighting and then people,
5 you know, may get, get hurt because that,
6 that will create liability. There will be
7 lawsuits over it. So it is a major issue.
8 There is no simple answer because it depends
9 on where you're talking about with who,
10 whether the County or the private landowner
11 has the responsibility currently but both
12 should be concerned about any changes that
13 impact safety in that area because it will
14 result in liability.

15 And I, I could look and see what we've
16 had in the past, you know, what lawsuits we
17 have pending or have in the past in those
18 areas and what the issues were. I also could
19 look at what type of agreements we have now,
20 but it definitely is an issue that's going
21 to -- needs to be dealt with.

22 CHAIR MOLINA: Okay. Thank you, Mr. Garneau. Mr.
23 Maberry, you had your hand?

24 MEMBER MABERRY: Question for Corp Counsel. Other
25 than beach access, this is obviously an

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1 interesting, interesting area to cover
2 because of the shared usage of the area, but,
3 but let's, let's take along the roadway for
4 example. How or does, I guess is a better
5 way of putting it, does a property owner who
6 uses lights that trespass onto public
7 property, do they in any way obtain any
8 protection as far as liability goes by, by
9 undertaking that by trespassing, by
10 intentionally putting lights onto a public
11 area?

12 MR. GARNEAU: I, I guess I'm not clear on the
13 question. Are you --

14 MEMBER MABERRY: Well, there appears to --

15 MR. GARNEAU: Could you give me an example? It
16 might help.

17 MEMBER MABERRY: Yeah. I apologize. I'm, I'm
18 getting the impression that in certain
19 circumstances that certain landowners feel
20 that by intentionally putting light off their
21 property onto adjacent property, they think
22 that that somehow provides them some
23 protection from litigation, and I'm
24 questioning if that has any, any validity to
25 it or if that assumption is, is valid

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1 whatsoever.

2 MR. GARNEAU: Well, are we talking about like in
3 resort situations where, you know, a resort
4 -- Certainly a resort has a duty to protect
5 its patrons so the people that are at the
6 resort who may want to, to walk out on the
7 beach, they need to be -- if that is an
8 activity that's being encouraged or, you
9 know, is likely to occur from the resort,
10 then the resort has to be conscious of,
11 "Well, is there adequate lighting, are there
12 obstructions that people could get into
13 trouble over, are there, you know, possible,
14 you know, other safety from people that
15 shouldn't be on the beach, you know, for
16 crime reasons?"

17 So I think that's a very real concern
18 of the resorts to protect the interest of the
19 people that are staying in their hotel and
20 they are responsible to look after their
21 safety.

22 I, I can't say, you know, because I
23 don't know enough about security lighting to
24 say that's, that that makes sense, but I can
25 understand where that would, where that

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1 concern would come from. Having, you know,
2 adequate lighting to, to so people don't slip
3 and fall, so people can be aware of other
4 people that are around them to the extent
5 that people wander from the hotel to the
6 beach probably at all times of the night, I
7 can understand why the hotels would want,
8 want to provide that lighting to limit their
9 liability.

10 MEMBER MABERRY: I'm not -- Pardon me, Mr. Chair.

11 I'm not saying that I disagree with your
12 whole line of reasoning but it still seems
13 like that was sort of a personal
14 interpretation of the situation. I mean from
15 a legal standpoint, does it actually provide
16 them any protection from litigation by, by
17 intentionally putting trespassing light onto
18 public property or private property of
19 private homeowners next door or public
20 beaches or whatsoever? Does it really
21 provide them any protection from litigation
22 from a professional response is what I'm
23 looking for, sir.

24 MR. GARNEAU: And I understand what you're saying.

25 You know, in terms of liability, they're

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1 going to be held to the standard of care of
2 what you would expect someone that is
3 responsible for maintaining the safety of the
4 customers of their hotel.

5 So if, if a jury would say not having
6 adequate lighting is not reasonable, then
7 that creates a liability. So what they're
8 trying to prevent is that from happening.

9 So, you know, the answer is yes. I
10 mean if they, they need to consider lighting
11 issues and safety issues and security issues
12 and crime issues when they're making plans,
13 you know, for lighting.

14 And so yes, it does reduce their
15 liability because it takes away an argument
16 that, you know, that you could, could make to
17 a jury if someone were injured by saying,
18 "Hey, you know, we, we've done everything
19 reasonably that we could be expected to do
20 reasonably, and one of those is that we've
21 lit dark areas and so that our, our patrons
22 can see where they're going and know about
23 hazards and know about what people may -- you
24 know, other people that may be around and so
25 forth." And that's the reason they're doing

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1 it.

2 You know, what a jury will do is, I
3 can't predict, but I can understand why
4 legally they'd want to take away that
5 argument from the, you know, plaintiff's
6 lawyer making that, "Hey, it was dark. You
7 guys should have known better and you should
8 have done it. You didn't and you had a duty
9 to do it."

10 MEMBER MABERRY: Thank you, Mr. Chair.

11 CHAIR MOLINA: Thank you, Mr. Maberry. Dr.
12 Altenberg?

13 MEMBER ALTENBERG: If I might follow up on that?
14 So you're saying that a resort could or a
15 lawyer could argue that the resort was
16 negligent in not lighting up somebody else's
17 property that was adjacent to them to protect
18 their own customers and that they should be
19 legally liable if they don't adequately light
20 up other people's property?

21 MR. GARNEAU: What we're talking about other -- You
22 mean the beach. I mean other people's
23 property means the public beaches --

24 MEMBER ALTENBERG: Yes.

25 MR. GARNEAU: -- fronting their property.

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1 MEMBER ALTENBERG: Right.

2 MR. GARNEAU: That's where people are likely to go.

3 MEMBER MABERRY: It could also be the private

4 landowner --

5 CHAIR MOLINA: I'm sorry. Go ahead now.

6 MEMBER MABERRY: I'm sorry.

7 CHAIR MOLINA: Dr. Altenberg, are you finished?

8 MEMBER ALTENBERG: That's the question, yeah.

9 CHAIR MOLINA: Okay.

10 MR. GARNEAU: Yeah. You know, I think that is the

11 argument they would make that, you know, the

12 beach is in front of the resort; it's

13 reasonably foreseeable that the people

14 staying in the resorts will want to walk on

15 the beach at night; and it's also reasonably

16 foreseeable that there will be obstructions

17 on the beach, things they could trip over;

18 it's also reasonably foreseeable that there

19 may be, be people on the beach that could

20 harm the visitors and so it's not a big leap

21 then for a, you know, for a court to decide,

22 "Hey, you know, you needed to do this." And

23 that's, that's where this issue of liability

24 and, and negligence come in.

25 So I think it's a very real concern for

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1 the, for the hotels and I think it's
2 something that they have to, to consider and
3 I think it's something that the subcommittees
4 should consider in, you know, determining
5 what standards to set for lighting.

6 CHAIR MOLINA: Okay. Dr. Altenberg?

7 MEMBER ALTENBERG: Well, then the question would be
8 if one was to believe that it's not
9 appropriate for a private property owner to
10 be liable for altering conditions of adjacent
11 property in order to be shielded from
12 litigation, what kind of language would need
13 to be included to protect, properly shield
14 them?

15 In other words, if we say that the
16 public beaches, that no, no private property
17 owner adjacent to the public beach should be
18 liable to have to illuminate that beach for
19 their own protection, how do we, what kind of
20 language would we need to assure that
21 indemnification?

22 MR. GARNEAU: Well, first of all, the beaches are
23 not County property, the beaches are State
24 property and so your ordinance that you're
25 looking at can only affect County property or

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1 other property within the County not owned by
2 the State, so I don't know of any way, any
3 mechanism within this ordinance to do that.
4 I mean it would take an action by the State
5 to, to amend our tort laws to give some sort
6 of immunity to hotels in this area, so it's
7 really outside the power of, of this
8 Committee.

9 MEMBER ALTENBERG: And your understanding of the
10 current situation as far as State tort laws
11 is that hotels are liable and they are
12 responsible to have a certain control over
13 conditions on the State beaches that are
14 adjacent to them to protect their customers?

15 MR. GARNEAU: Well, again, you know, hotels are
16 responsible for the people that are staying
17 in their hotel, so if they know of a
18 condition then they need to, there are cases
19 that talk about duties, a duty to warn and so
20 forth.

21 So I mean I -- In terms of hotels now,
22 this is not an uncommon use. I mean people
23 come to our islands to stay in the hotels on
24 the beaches so they can go down to the beach
25 and many times that's at night, so it does

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1 create liability for the hotels so they --
2 You know, I don't know who reiterate this but
3 it just -- there's, there's, I don't know how
4 we're going to eliminate that without, you
5 know, the State legislature taking it up and
6 somehow changing our tort law.

7 CHAIR MOLINA: Dr. Altenberg, I'll come back to
8 you. I have Ms. Better would like to ask a
9 question, I assume presumably, of the
10 Corporation Counsel?

11 MEMBER BERNARD: Yes, and it, and it also may be to
12 Mr. George. Isn't it so that if you post a
13 warning sign on the property that you can --
14 that could also be taken into consideration
15 just like your lighting is just an attempt to
16 safeguard your, your visitors, they can still
17 sue you. They can say that the lighting
18 wasn't adequate and we know that they --

19 There's almost, there's almost nothing
20 you can do that people can't sue you for
21 anyway, but the point is will the jury say,
22 "Well, they tried their best." And if you
23 put up a sign that said, "We are actually
24 working to protect sea turtle habitat and
25 we're not lighting our beaches in order to

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1 support that. And in fact you can go out
2 there with this guided tour," and you have
3 this whole other way of looking at it rather
4 than it's all about there's only one usage of
5 the beach, there's only one appropriate way
6 to be out there and that's with bright lights
7 to safeguard our usage, there may be another
8 way.

9 CHAIR MOLINA: Okay. I guess I saw Mr. George's
10 hand, he'd like to respond to that. Proceed,
11 Mr. George.

12 MR. GEORGE: My understanding is, is we call it
13 risk management and you always try -- If you
14 foresee a potential danger, whether there's a
15 warning sign or not there, you are still
16 liable.

17 In other words, if I have a guest goes
18 out into the ocean and gets hurt, either
19 hurting his neck with the waves or whatever,
20 I'm still potentially liable. I've put a
21 sign up. They're still going to sue me.
22 And, and maybe Corporation Counsel can say
23 more to that but they're still going to sue
24 you.

25 So what you try to do is you mitigate

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1 any of these things by saying, "Okay. We did
2 do this. We put up signs. We put up lights.
3 You know, we made a rough surface for them to
4 get down to the beach." Technically we're,
5 because the beach is State, we do not
6 technically have legal access, you know, from
7 elevation changes.

8 So what we do is we go to the State and
9 we say, "Well, you come out, take a look at
10 it and see what we can do to mitigate this,"
11 And then the State will tell you, "Okay.
12 Build a ramp and a handrail," so that's how
13 it goes about. It's a continuous process of
14 trying to mitigate all the foreseeable things
15 that could happen.

16 So based on past history if you, if you
17 have a light out where there was a light
18 before, they have a potential of saying,
19 "Well, why didn't you change the light bulb?
20 You knew the light fixture was there. You
21 knew there was a problem was there." The
22 suit tends to have more --

23 MEMBER BERNARD: (____)

24 MR. GEORGE: Yeah. So that's the reasoning behind
25 it.

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1 CHAIR MOLINA: Thank you, Mr. George. Okay. Dr.
2 Altenberg, back to you.

3 MEMBER ALTENBERG: I mean I would imagine a lot of
4 the resorts wish they could own the beach as
5 well but the, in the State law, but in the
6 State law it specifies that --

7 MR. GEORGE: I'd like to put that -- Bill George --
8 that the hotels would not, or resorts would
9 not want to own the beaches as well. There's
10 too many problems involved in it.

11 CHAIR MOLINA: Okay. Proceed, Dr. Altenberg.

12 MEMBER ALTENBERG: Okay. Not going to that
13 direction, but clearly at this level State of
14 law it says that the States own the beaches
15 up to the high tide mark. So what is, what
16 is the legal ramification of that ownership
17 as it pertains to liability and that must
18 surely be well trod legal territory?

19 CHAIR MOLINA: Mr. Garneau?

20 MR. GARNEAU: Yeah. I think obviously our office
21 doesn't do State beach cases, so if you'd
22 like me to, I can by the time of the next
23 meeting I'll look at some of them and let
24 know, you know, what the liability is. Mr.
25 George might know.

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1 CHAIR MOLINA: Mr. George?

2 MR. GEORGE: Bill George. Past history from cases
3 both in Kaanapali and Wailea, how do you
4 prove where they got injured? So that's why
5 you're still a litigant in the proceedings.
6 They'll still call you in whether it
7 happened, you know, 50 feet out in the ocean
8 or not, because the water, where was the
9 water line, where did they get hurt? You're
10 still called in and you're still a defendant.

11 CHAIR MOLINA: Thank you, Mr. George.

12 MR. GARNEAU: Can I say one last thing about --

13 CHAIR MOLINA: Proceed, Mr. Garneau.

14 MR. GARNEAU: With regards to lighting standards,
15 to the extent that this Committee's
16 recommendations would become County lighting
17 standards and those would be enforceable
18 against private landowners, so that if, if
19 the Committees made recommendations that
20 limited the ability of a private landowner
21 to, to light areas and the normal case would
22 either be the private landowner, the resort
23 or the State who would be involved in this
24 litigation we're talking about, but I can
25 envision where if the, our ordinance limits

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1 the ability of the resort owner to limit
2 their liability, that creative attorney would
3 sue the County too and say, "Okay. Normally
4 you don't have any liability here but you've,
5 you've limited this other person's ability so
6 now we're bringing you into the lawsuit and
7 you're going to be responsible." So it could
8 create liability.

9 And also the resort owners may say
10 that, "Okay. Well, we were just going by the
11 County standards and so we want the County to
12 indemnify us."

13 So I'm concerned that whatever we do,
14 you know, within this ordinance as to
15 lighting in these areas doesn't limit the
16 resort owners' ability to protect their
17 visitors.

18 CHAIR MOLINA: Okay. Thank you, Mr. Garneau.

19 Members, I'm going to ask you at this time to
20 hold off on your questions at this time.
21 We've reached the hour. The Chair has some
22 personal business to attend to, so I
23 apologize that I'm having to curtail the rest
24 of this discussion on this item.

25 We'll continue this at our March 7th

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1 meeting. In the meantime for those of you
2 who have a pressing need to get your
3 questions answered from, I presume, Mr.
4 Garneau or Mr. George, please feel free to
5 e-mail or write to the, to our staff here and
6 we'll try to get a response for you prior to
7 the next meeting, if you have this need to
8 get your questions answered.

9 Our next scheduled meeting is set up
10 for March 7th, Thursday, at nine a.m. back
11 here, and the Chair would like to ask you to
12 review Section .080 as well as .090 and .100
13 for our next meeting.

14 So if there is any announcements, at
15 this point the Chair will entertain any
16 announcements.

17 Hearing none, the Chair would like to
18 thank you all for your participation today.
19 We did make some progress. The Chair is
20 pleased. It's coming along slowly but I'm
21 very optimistic we're reaching some type of
22 compromise and --

23 Yes, Mr. McCord?

24 MEMBER McCORD: Do you foresee asking to extend the
25 life of the Committee?

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1 CHAIR MOLINA: I at this point, it would be safe to
2 say I will -- And just for -- And that's good
3 that you brought that up, Mr. McCord. The
4 last Public Works meeting prior to budget
5 session is scheduled for March 13th.

6 We have a Public Works meeting next
7 week Wednesday, the 27th. We've talked about
8 that date of March 21st to go to Hilo or the
9 Big Island. So looking at that and seeing
10 how we're progressing at this point, I
11 believe, I think it would be a safe, the
12 safest thing to do would be to consider a
13 request for an extension of up to 90 days
14 from April 2nd until I guess July 2nd.

15 The Chair is hopeful that we'll
16 complete our duties well before then. After
17 the budget session, we would reconvene
18 probably in the middle of June. Maybe Mr.
19 Saldana, I believe am I correct on that?

20 MR. SALDANA: The Subcommittees do have the ability
21 of, of meeting during the budget time but
22 it's, it's a tough time for the Council
23 Members so if they don't have the opportunity
24 to, to meet, then you could schedule a time
25 after that.

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1 CHAIR MOLINA: Right. And the Vice Chair of the
2 Committee is also a Council Member so we
3 would both be tied up with the budget-related
4 items.

5 We could meet as early as May. I
6 believe the committees go back into session
7 in the middle of May so we could come back
8 then and hopefully wrap up by June at the
9 latest. I don't anticipate us going into
10 July, but I would like to at least wrap
11 things up by June.

12 So in other words, we'd have a break,
13 about a month break before reconvening or a
14 month and a half. So I will take that
15 regulation into consideration to put that on
16 our next agenda item either for February 27th
17 or March 13. I don't foresee any problems
18 with the Public Works Committee not giving us
19 an additional 90 days to work on this matter.

20 Ms. Bernard?

21 MEMBER BERNARD: I'd just like to ask if there are
22 any Resource Members or Committee Members
23 that would like a copy of this 73 page
24 document on --

25 CHAIR MOLINA: Okay.

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1 MEMBER BERNARD: -- lighting hazards of sea
2 turtles?

3 CHAIR MOLINA: Okay. Those of you in Resource or
4 on the Committee, you can check with Mrs.
5 Better after the adjournment of this meeting
6 to get copies of that document.

7 MEMBER BERNARD: And can your office make copies?

8 CHAIR MOLINA: Okay. We'll look into that.

9 MEMBER BERNARD: For --

10 CHAIR MOLINA: How much?

11 MEMBER BERNARD: -- distribution. 73 pages.

12 CHAIR MOLINA: 73 pages. There isn't a more
13 condensed version of it? Okay. We'll take
14 that into consideration. So far we have
15 what, one person?

16 MEMBER BERNARD: One.

17 CHAIR MOLINA: Any of the Subcommittee Members
18 would want that at this point those that are
19 here?

20 No, I don't see any hand going up. I
21 know Mr. George is --

22 MEMBER MABERRY: We have the summary, sir. We have
23 the two-page summary.

24 CHAIR MOLINA: Oh, you do have a two-page summary.

25 MEMBER MABERRY: The document which is what she's

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1 discussing.

2 CHAIR MOLINA: Okay.

3 MEMBER BERNARD: We have one request.

4 CHAIR MOLINA: Okay. You have one request. All

5 right. Well, I think maybe we can, that's

6 possibly workable.

7 Okay. Hearing no other announcements,

8 this meeting is adjourned.

9 MEMBERS VOICED NO OBJECTIONS. (EXCUSED:CT)

10 ACTION: DEFER pending further discussion.

11 ADJOURN: 12:06 p.m.

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C E R T I F I C A T E

STATE OF HAWAII)
) SS.
CITY AND COUNTY OF MAUI)

I, Mary Anne Young, Certified Shorthand Reporter for the State of Hawaii, hereby certify that the proceedings were taken down by me in machine shorthand and was thereafter reduced to typewritten form under my supervision; that the foregoing represents to the best of my ability a true and correct transcript of the proceedings had in the foregoing matter.

I further certify that I am not attorney for any of the parties hereto, nor in any way concerned with the cause.

DATED this 23th day of March, 2002, in Honolulu, Hawaii.

Mary Anne Young
Hawaii CSR 369, RPR
Notary Public for Hawaii
My Commission Expires: 9/2002

