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 BEFORE THE
 ENERGY RESOURCES CONSERVATION AND DEVELOPMENT
 COMMISSION OF THE STATE OF CALIFORNIA

In the matter of,)
) Docket No. 16-EBP-01
)
 2016 Existing Buildings Energy)
Efficiency Action Plan)

**STAFF WORKSHOP ON THE
 DRAFT 2016 EXISTING BUILDINGS ENERGY
 EFFICIENCY ACTION PLAN UPDATE**

CALIFORNIA ENERGY COMMISSION
 FIRST FLOOR, ART ROSENFELD HEARING ROOM
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MONDAY, OCTOBER 17, 2016

9:30 A.M.

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

2 OCTOBER 17, 2016

9:30 A.M.

3 MR. JENSEN: Let's go ahead. So, welcome,
4 everyone, good morning. This is the Action Plan Update
5 Workshop, so, hopefully, that's what you're here for.

6 I'm going to -- we're going to have a variety of
7 presenters today. I'm going to take us through the
8 administrative stuff, regarding the workshop. I'll hand
9 it off to Martha. I'll come back, after Martha, and
10 then some other folks will take over.

11 So, first of all, housekeeping items. Emergency
12 exits, you can exit the room either how you came in,
13 there's another door in that back corner, there. Either
14 one will get you to the same place.

15 You can exit through the door, through which you
16 came in, or through the emergency exit. Don't use the
17 emergency exit, unless it's an emergency.

18 Restrooms, right out -- right out in that same
19 general area, right out there. Snack bar, head either
20 up the stairs, or up the elevator, and that's where the
21 snack bar is. There's an open seating area, go through
22 the doors there to get to the snack bar.

23 When it comes time for comments, first we'll
24 take comments in the room. Second, we'll do people who
25 are on WebEx. And last, we'll unmute the phones, and

1 people who are on phones can speak up. I cannot stress
2 enough, how important it is, if you don't have anything
3 to say, please keep your phone muted. We will unmute
4 the phone lines, but if you don't have anything to say,
5 keep it muted on your end so we don't hear whatever
6 might be going on in the background, there.

7 WebEx, so, the secondary group of folks are
8 those on WebEx. If you're on WebEx, and you want to
9 make a comment, please raise your hand so we know to
10 call on you.

11 Here's the agenda. First, will come -- Martha
12 will give us the Action Plan Overview and Policy
13 Updates. We've got -- we'll present each of the five
14 goals, separately. After each of the goals, we'll have
15 a public comment period just for that one goal.

16 This is not the -- we've fiddled, continued
17 fiddling with the agenda, after publishing it. But the
18 general idea is we'll have Goal 5, comments for Goal 5,
19 and then we'll have a general comment period, where
20 people can comment on anything that was presented
21 today, if they want to.

22 We're hoping to get through all of this before,
23 and not have to take a lunch break. So, if you've got
24 something to say, please weigh the importance of what
25 you have to say against, you know, finishing this before

1 lunch. So, keep that in mind.

2 (Laughter)

3 MR. JENSEN: All right. Comment deadline is
4 5:00 p.m., on Tuesday, November 1st. The Docket Number
5 is 16-EBP-01. We will explain, at the end, how to do
6 that. But that's your comment deadline.

7 And I think this is where I hand this over to
8 Martha.

9 MS. BROOK: Good morning. That was Eric Jensen,
10 just for your information. And my name's Martha Brook.
11 And we are both part of the Existing Buildings Unit, in
12 the Energy Efficiency Division.

13 I'm not going to start, quite yet, because
14 Commissioner McAllister's expected to arrive soon, and
15 we want to give him the chance of welcoming you,
16 personally. And also, having an opening message, if he
17 wants.

18 (Off-record comment)

19 MS. BROOK: Yeah, I guess I could, but most of
20 my jokes are inappropriate. So, probably not going to
21 go there.

22 (Laughter)

23 MS. BROOK: So, I am not going to just BS. I'm
24 going to just be quiet and hope --

25 UNIDENTIFIED SPEAKER: Why don't we introduce

1 ourselves?

2 MS. BROOK: Yeah, that's good. Why don't you do
3 that, either up there -- so, the team will introduce
4 themselves while we wait for Commissioner McAllister.

5 MR. YUNIS: Hi, my name is Laith Yunis, with the
6 Existing Buildings Unit. I'll be going over the data
7 goal, Goal 2. My main focus here is the Data Lead,
8 within the Existing Buildings Unit. I've been working a
9 lot with Eric Jensen, on the AB 802 Regulation
10 development, and the infrastructure. We've been doing a
11 lot of calls with the utilities to discuss how to
12 proceed with AB 802.

13 MS. BROOK: All right, we'll do the rest of the
14 introductions later. But I did want to make one more
15 announcement, as McAllister's getting seated. So, we
16 have -- we have a water issue in the building, where all
17 the drinking fountains have been shut off.

18 And so, Daniel, who just left, is going to bring
19 down a packet of bottled water, and they'll be outside,
20 somewhere, where you can grab them, if you're thirsty.

21 All right. So, we've done the housekeeping
22 items, Commissioner McAllister. And if you would like
23 to welcome the group and introduce the day, then that's
24 up to you.

25 COMMISSIONER MCALLISTER: Absolutely. Well,

1 thank you, very much. Sorry I'm running a little bit
2 late. I'm glad you went ahead and got started with the
3 housekeeping and the introductions.

4 So, my name's Andrew McAllister. I'm the
5 Commissioner that oversees energy efficiency. And,
6 Assembly Bill 758 has been sort of, I guess, probably,
7 the top priority, really, if we have to think about all
8 the things that we're doing in the Efficiency Division,
9 and in general, you know, efficiency policy.

10 You know, including Title 24 Building Efficiency
11 Standards, and Title 20 Appliance Efficiency Standards,
12 in addition to those two, sort of major bread and butter
13 things, AB 758 has really been one of our driving
14 enterprises in the Division, over the last few years.
15 Really, since I sat down with the Commission.

16 And, in part, it's because I think we all see
17 that there's really no path, that we can discern, that
18 gets us where we need to go, overall, with our energy
19 and carbon goals, that doesn't go straight through the
20 existing building stock. So, we have to figure out ways
21 to affect the various building sectors in our built
22 environment.

23 They're very diverse, you know, from the
24 smallest, multi-family residential apartment, with a
25 renter in it, you know, all the way up to the largest

1 commercial building, and government buildings across the
2 State.

3 So, there's lots of variability, so it means
4 lots of strategies that, together, need to add up to a
5 value proposition that can take place in every existing
6 building.

7 So, I think staff hears this from me all the
8 time, and I think we all really agree on this point,
9 that we have to engage the marketplace, and the building
10 owners, and the residents across the State. Because
11 they're the ones that have to choose to do projects.
12 You know, this is not something that is -- at least, in
13 most cases, this is not something that lends itself to
14 sort of, you know, mandates.

15 If we do -- and we will go there, if we have to,
16 eventually, when we see, really -- we have enough
17 information to understand what the rock solid value
18 propositions are that everybody ought to just be doing.
19 Right?

20 But for the most part, and certainly for the
21 near term, we've got to help the marketplace define
22 value in a building, and offer the product that the
23 building owner and the resident wants, at a reasonable
24 price, that has the full range of benefits to motivate
25 that decision.

1 So, many of the strategies in the Action Plan
2 sort of back that up, try to bolster that approach. You
3 know, data, leadership at the government level, up and
4 down the State, helping the workforce sort of move to
5 the future challenge. Offering financing, other sort of
6 market gap-filling endeavors, you know, assistance that
7 really helps us go down this path.

8 You know, and there's plenty of private capital,
9 on the sidelines, that's looking for a great investment.
10 And we just need to help the capital find the projects,
11 find good projects.

12 So, in general, that's kind of the philosophy, I
13 think, that we've taken here. And, you know, if you
14 read the Action Plan, there are literally dozens of very
15 substantive strategies that, together, make it up. And
16 that's because there's no silver bullet. You know,
17 we're sort of taking the silver buckshot approach.
18 There's lots of -- there are lots of good ideas. There
19 are lots of initiatives that can help, but no one is
20 sufficient to really get it done.

21 So, really, it's understand the marketplace,
22 which we're focused on here. Trying to get better
23 information about it, so that we can consciously and
24 intentionally do policy that targets the right
25 opportunities, and helps the projects happen in the

1 right way.

2 So, I'm extremely excited about what the future
3 holds for 758, and its subsequent adoption in law,
4 really, beyond 758, originally, in SB 350, as a doubling
5 of energy efficiency. So, that evolution, I think, is
6 very intentional in the policy community, and the
7 Legislature and the Governor know that we're headed in
8 this direction, and very much support it.

9 So, we've got a lot of heavy lifting ahead of
10 us. We've done a lot, already, and we've got, I think,
11 a pretty clear path forward.

12 And I really want to take the time to have the
13 conversations that we need to, to get the right
14 stakeholders involved. I really appreciate all of you,
15 in the room, for coming. Anybody who's on the phone, on
16 the web, as well. It's really critical to have
17 knowledgeable and passionate people involved in this
18 that really have -- you know, that are thinking long
19 term for what's best for California, and putting in
20 their perspectives.

21 And I think things are really moving forward in
22 a productive way. We're working a lot with our sister
23 agency, the CPUC, and other agencies involved to, I
24 think -- I think form, really, a team mentality that's
25 helping each of these strategies move forward.

1 So, Eric, and Abhi, and Martha, and all the
2 staff that's involved on this, on this project, this
3 sort of enterprise around AB 758, we're all very
4 passionate about it. And I'm very thankful for that and
5 I feel really fortunate to be here, pushing this very,
6 very necessary discussion in California.

7 And my door is open, for those of you who have
8 views that need to be -- that you want to be considered.
9 I try to keep my door open, as much as possible. I know
10 staff does, as well. So, please, don't be shy. It's
11 not just about the workshop. It's about the ongoing
12 conversation.

13 So, looking forward to a great day, today, and
14 back to Martha. Thank you, very much, for coming,
15 everyone.

16 MS. BROOK: Thank you, Commissioner.

17 Okay, so despite what Eric said about us wanting
18 to get done before lunch, we really are here to hear
19 your comments, and to have your contributions heard, and
20 that's from all of you who came, and traveled here
21 today, but also for those of you on the phone. We'll be
22 here as long as we need to be here to get your comments.

23 And I would say that we know that we didn't
24 capture everything that's happened in the last year,
25 which is basically what we tried to do in the update is

1 to, basically, what's different and new since we
2 published the plan last year. But it's only been a
3 year. So, it really, I think, is a true update. We're
4 not -- we don't have anything structurally, phenomenally
5 different, than a year ago.

6 But if you know, you personally, in your
7 organization, or you know of work that's really
8 innovative, and you think has the ability to scale, and
9 is paradigm-shifting, and it's not in this plan update,
10 please let us know, because we would really like to hear
11 about it.

12 Okay, so, as Andrew mentioned, the Action Plan
13 was a requirement in Assembly Bill 758, Skinner, 2009.
14 And it calls for a statewide, comprehensive program to
15 achieve greater energy efficiency in existing buildings.

16 So, it's not an Energy Commission thing. It's a
17 statewide thing. And as you can see, in the leadership
18 we've identified in the strategies, in the plan,
19 multiple organizations across the State are really
20 providing the leadership to accomplish the strategies in
21 the plan.

22 So, the plan, itself, as Andrew mentioned, is a
23 roadmap to activate market forces and to transform the
24 existing building stock into high-performing, energy-
25 efficient buildings.

1 What has changed? So, one of the things that
2 was changed is policy. We have two or three large
3 policy updates that happened in the State, over the last
4 year, and we've tried to -- tried to summarize that
5 policy in the update, and to explicitly, you know,
6 document how we're going to implement those strategy
7 directions.

8 One of the things that was required in 350, was
9 that we did this plan update, in the timeframe that
10 we're completing it in. And so, we're definitely going
11 to be checking that box. Because the intent is that
12 this update gets adopted by the full Commission before
13 January 2017.

14 But this plan is, we think, an addendum, or an
15 update. It does not replace the entire 2015 plan. And
16 I think you can tell, from the plan document, if you've
17 had a chance to look at it, that it is an update and
18 it's not a replacement to the comprehensive plan that we
19 published last year.

20 So, SB 350 does a number of things. One of
21 which is that it requires, by January 2017 --

22 COMMISSIONER MCALLISTER: Can I just interject
23 something?

24 MS. BROOK: Yeah.

25 COMMISSIONER MCALLISTER: So, maybe you can just

1 explain, briefly, how the document that we've posted
2 relates to the full plan.

3 MS. BROOK: Okay.

4 COMMISSIONER MCALLISTER: Maybe you sort of did
5 that already but --

6 MS. BROOK: No, I don't think I did.

7 COMMISSIONER MCALLISTER: But kind of, sort of
8 how people can use the document. You know, because we
9 try to be parsimonious about what's actually in that
10 document, so the places where kind of we really feel
11 like people need to look, to get a view of what the
12 changes are. Right?

13 MS. BROOK: Yeah.

14 COMMISSIONER MCALLISTER: So, it's not a
15 reproduction of the whole Action Plan. Right?

16 MS. BROOK: So, thank you, Commissioner. So,
17 the plan document, it basically points back to the plan
18 for all of the policy background. Basically, the
19 history of energy efficiency in California. That's in
20 the original plan. It's not replicated here.

21 So, it goes really straight into a policy
22 update. And then, it attempts to update and refresh the
23 set of strategies that are in Chapter 3 of the original
24 plan.

25 But the text, itself, in the update, is all new.

1 So, it's not underlined in ~~strikeout~~, over the original
2 plan. It's new text that really provides an update of
3 where we are, in meeting our strategy objectives, that
4 were outlined last year.

5 It does include the original strategy tables,
6 for a reference. So, then, you can understand where
7 we've modified strategies.

8 And most importantly, probably most of the
9 updates are in the timeline. Where we were overly-
10 ambitious in setting target dates last year, we've tried
11 to chew those up a bit, about what we expect to happen
12 with our fresh, 2016 eyes.

13 And I think that's about it. Yeah.

14 Okay, so in the policy update section, we
15 include an introduction to SB 350, which is, you know,
16 shorthand for doubling energy efficiency, in California.
17 So, SB 350 assigns the Energy Commission, working with
18 the Public Utility Commission, and other stakeholders,
19 the direction to establish energy savings targets that
20 will achieve a cumulative doubling of energy efficiency
21 savings by 2030.

22 SB 350 does additional things. Like, it
23 requires the Energy Commission to study the barriers
24 to -- of energy efficiency in the low-income and
25 disadvantaged community sectors, in California. And

1 we're separately publishing a report to meet that
2 section of SB 350.

3 SB 350, also, along with AB 802, gives the
4 Energy Commission reinforced authority to complete the
5 data collection regulations that will -- will allow us
6 to actually track policy, energy efficiency policy
7 achievements over in our long-term demand forecast
8 paradigm.

9 And this is critical for us being able to
10 implement both 350, and AB 802, in terms of really
11 understanding where energy efficiency savings are
12 incremental, or have already been assumed to happen in
13 our demand forecast.

14 AB 802 has two separate and distinct mandates.
15 One is that it establishes a new building energy use
16 benchmarking and public disclosure program, which the
17 Energy Commission is in the process of implementing.
18 And if you're involved in our Benchmarking Disclosure
19 Program, then you're well aware that we're wrapping up
20 our pre-rulemaking activity, and getting ready to open
21 our formal rulemaking activity in that area.

22 AB 802 also establishes existing conditions
23 baselines, as an opportunity for ratepayer programs to
24 think and deploy efficiency programs differently in the
25 State. So, in the past, by and large, the predominant

1 baseline in ratepayer-funded programs was a code
2 baseline. Which meant that you only got a ratepayer
3 boost, in terms of an incentive or a rebate, if you
4 installed a piece of equipment, or a service that went
5 beyond what's in our Title 20 or Title 24 standards.

6 And existing conditions baseline allows program
7 administrators and program implementers to help
8 consumers get to code, as well as go beyond code. And
9 there are very -- several exceptions to existing
10 conditions baseline, which the Public Utility Commission
11 is determining, now, through a set of workshops and
12 proceedings. So, not every efficiency activity will
13 have an existing conditions baseline, but many will.

14 And, AB 802 also supports the concept of
15 normalized meter-based energy savings. And this is,
16 basically, the opportunity to take advantage of our AMI
17 infrastructure in the State, to calculate energy savings
18 based on metered consumption. And we'll be talking more
19 about that, later today, in our industry section.

20 COMMISSIONER MCALLISTER: I want to also bring
21 up a point, Martha, if I can. Just, you know, so that
22 discussion about sort of the, you know, baseline and
23 what's happening at the PUC is sort of to refresh the
24 approach that the utility-funded ratepayer -- or, the
25 ratepayer-funded, you know, programs, the portfolio,

1 refresh the portfolio, itself. So, the activities that
2 are funded by the ratepayer dollars at the PUC, or at
3 the individual IOUs.

4 So, I want to make sure, though, that we keep in
5 perspective that we do, sort of most broadly, some of
6 the -- you know, there's some really interesting ideas
7 floating around about how to just get the existing
8 buildings, themselves, up to code, whether or not they
9 participate in ratepayer-funded programs, in the
10 portfolio.

11 MS. BROOK: Uh-hum.

12 COMMISSIONER MCALLISTER: And so that's --
13 again, I think we were -- it's helpful to think about
14 the marketplace broadly, and sort of its transformation.
15 And then, clearly, how any funds, including the biggest
16 pot out there, which is the ratepayer-funded utility
17 portfolio programs, can sort of help that larger
18 endeavor.

19 So, you know, it's very valuable, for a project
20 to take place, to get an old building, that's got really
21 bad performance, up to code or even beyond code. And
22 that is true, independent of what programs it
23 participates in.

24 And so, I think we want to help sort of
25 cultivate this, I think, flexible understanding of how

1 we can help the marketplace. And so, you know, we
2 definitely want to make sure that the programs do all
3 they can do. But we also, sort of, don't want to focus,
4 exclusively, on that issue because I think there's a
5 broad marketplace that many of which -- you know, many
6 projects within which never touch any program, you know.

7 So, I think there's -- let's just try to keep
8 that broad perspective, I guess is what I'm saying.

9 MS. BROOK: Uh-hum.

10 COMMISSIONER MCALLISTER: That's what we've
11 tried to do in the Action Plan.

12 MS. BROOK: That's a very good point. And one
13 of the things that the Energy Commission, and the Public
14 Utility Commission, will be doing over the next year is
15 to set these SB 350 savings targets.

16 And what Andrew mentioned is definitely
17 something that we're going to be considering, when we
18 establish new wedges of energy savings, is what's not
19 already counted, and thought about in the classical
20 ratepayer program domain. And where can we achieve
21 additional incremental savings. And looking outside of
22 ratepayer-funded programs is an obvious place that we'll
23 be focusing.

24 COMMISSIONER MCALLISTER: And there's a flip
25 side of that, too, because, you know, the ratepayer-

1 funded programs can be extremely, they are extremely --
2 you know, they have a history of being extremely helpful
3 for the market transformation endeavor, generally.
4 Right?

5 And so, you know, where we sort of, I think,
6 need to, you know, help -- you need to help everyone
7 think about this. All the stakeholders kind of need to
8 help in our community here, think about this, is when do
9 we -- how can we appreciate the impact of ratepayer-
10 funded programs, or any other programs, in the market
11 transformation kind of perspective. You know, and not
12 trip over some of the direct attribution questions, and
13 really sort of think of this that we're funding
14 something that's more long term, that's more, you know,
15 getting the marketplace to sort of shift, broadly, in
16 ways -- in ways that we can measure the impact of
17 broadly, but maybe can't trace back to individual
18 initiatives.

19 So, I'm already kind of going wonky here, on the
20 kind of the attribution question. But I think it's
21 really important to find the balance of being
22 accountable for the use of program funds, but not to the
23 sort of extreme of losing sight of, you know, the
24 forest. Right? And focusing too much on the trees.

25 So, I think there's a balance there. And,

1 hopefully, everyone here can help us find that, and
2 articulate that, and sort of keep that in mind as we,
3 you know, refresh all the strategy in the Action Plan.
4 So, thanks.

5 MS. BROOK: Okay, two more policy updates. One
6 is AB 793, which directs the Public Utility Commission
7 to require that the Investor Owned Utilities provide
8 incentives to residential, and small and medium
9 business, for energy management technologies.

10 So, the Investor Owned Utilities have done the
11 work they needed to do, to develop these plans, and
12 they're getting reviewed, and discussed, now.

13 And this supports several strategies in both our
14 Data Section, and our Consumer Value Section of our
15 plan. So, we wanted to make sure that we highlighted it
16 here.

17 And then, the Public Utility Commission is in
18 the process of the rolling portfolio proceeding. And in
19 August, they published, or adopted a final decision that
20 gave direction on high opportunity programs, and
21 projects, which is part of AB 802. This is the Meter
22 Based Savings Pilots that will be launching in 2017.

23 And several decisions in that August decision,
24 in terms of statewide programs, and streamlining
25 statewide programs to bring down administrative costs,

1 and a real push to get the industry to innovate, and a
2 push towards third party program implementer strategies,
3 included in the rolling portfolio. And lots of really
4 strong and, hopefully, effective, policy in that August
5 decision, by the Public Utility Commission.

6 Okay. So, we're not -- I don't expect you to
7 actually read this slide. This is sort of our -- kind
8 of our framework for the day. What we were thinking
9 that we would do is break down each of these timeline
10 graphics by goal.

11 So, we'll be spending the rest of the day taking
12 these goal-by-goal, with the intent of hearing from you
13 about what's potentially critically missing in this
14 long-term view, of our implementation strategies, to
15 actually achieve a doubling of energy efficiency by
16 2030?

17 My personal opinion is that we don't really have
18 enough strategies in the 2019 to 2025 period to
19 accomplish or to say that we have a robust 10-year
20 roadmap. And I think that's mostly because, at least
21 from -- maybe it's a human thing. Maybe it's just a
22 nerdo engineering thing. I don't know what it is. But
23 it's really hard to look -- I mean, everything that you
24 want to do is in the next three years, and so it's hard
25 to look further out, and to figure out what's strategic,

1 that has to get accomplished in the five/seven year
2 timeframe. I think that's really where most of our gaps
3 are, if I was going to be completely honest.

4 So, help us out. What are we missing that,
5 really, is going to help us accomplish the 10-year
6 timeframe?

7 So, and the other thing, to be honest with you,
8 some of the reason this looks maybe skewed towards Goal
9 1, is that it's like graphic real estate. Like, it's
10 really hard to get it all on a one-page, or a two-page,
11 document. So, anything that you can do to suggest where
12 we're really, obviously, just not being comprehensive,
13 in terms of the goal strategies, we'll definitely
14 appreciate that.

15 All right. Eric, I think you're up.

16 MR. JENSEN: Thanks, Martha.

17 So, some of these -- so, I'm going to be doing
18 Strategies 1.1 through 1.3. 1.1 is State and school
19 buildings, and 1.2 is benchmarking and public
20 disclosure. 1.3 is minimum standards and best practices
21 for building performance assessment tools.

22 Some of these things will be changes in
23 direction or changes in policy. Some of them are just
24 updates on things we already presented in the original
25 Action Plan.

1 So, let's see, here. So, Executive Order B-1812
2 is a requirement for State buildings to improve their
3 energy use and water use. And, specifically, it called
4 for a 20 percent reduction in grid-based energy, by
5 2018, using a 2003 baseline, and a 20 percent reduction
6 in water, by 2020, using a 2010 baseline. So, different
7 baselines and different goal years for both of those.
8 The main point was a 20 percent reduction in both.

9 To date, agencies have reduced energy use by 17
10 percent and water use by 40 percent. So, we're doing
11 pretty well there.

12 State agencies are also required to benchmark
13 energy and water use, and report it to the Department of
14 General Services. So far, they've done so for over
15 1,500 State buildings. And, currently, the State's
16 Energy and Sustainability Program has 90 State building
17 retrofit projects in progress.

18 Let's see, here. Okay, clean energy -- don't
19 worry too much about the list here. I'm just sort of
20 hitting some of the high points from the plan update,
21 and so I won't be -- won't be working directly off of
22 this slide, here.

23 The Clean Energy Jobs Act, commonly known as
24 Prop. 39, provides funding to improve the energy
25 performance of school buildings and campuses. The

1 Energy Commission is administering the program for
2 kindergarten through 12th grade. To date, they've
3 approved more than 1,000 applications for projects,
4 totaling over \$700 million. The estimated savings, so
5 far, are 275 million kilowatt hours of electricity,
6 annually, and over 1.7 million therms of natural gas,
7 annually.

8 There are two new databases for seeing some of
9 the outcomes from this program. One is the Prop. 39,
10 publicly searchable database, which has some high level
11 and general data about the program. The other is the K
12 through 12 Program Research Database. The URLs for both
13 of those are in the Action Plan update.

14 The Department of State Architects completed, or
15 is working on a project to improve, to get schools --
16 or, to examine the feasibility of getting schools to
17 zero net energy. And they completed an assessment, or
18 they financed some architectural firms, completing
19 assessments, to do so. Seven firms, in seven different
20 -- seven school campuses, in a variety of climate zones,
21 called the 7-by-7-by-7 program. And those findings are
22 on the website. It's 7-by-7-by-7 Design Energy Water.
23 The link to that is also in the plan update.

24 Next, we get to benchmarking. So, when we
25 released the plan, the original plan, in September 2015,

1 the program in effect for benchmarking was AB 1103,
2 which required building owners to disclose building
3 energy usage to a very limited group of folks, only at
4 time of transaction.

5 Since then, AB 802 passed, just one month -- in
6 October 2015. That repealed AB 1103, and put in place a
7 new program, which will provide energy use data to
8 building owners, certain building owners, and requires
9 the Energy Commission to create a program for
10 benchmarking, publicly disclosing energy use information
11 for a subset of those buildings.

12 So, some important distinctions between the
13 previous program and the new program. The new program
14 includes multi-family buildings. It establishes an
15 explicit customer information threshold. So, we don't
16 need to go into the particulars, but there was
17 ambiguity, in the previous program, about in what cases
18 utilities needed to provide data to building owners.
19 And now, it's much clearer.

20 And, as I mentioned, there's no longer a
21 specific time of transaction disclosure requirement. It
22 will be a time certain requirement.

23 However, any time someone is interested in
24 purchasing a building, or renting space in a building,
25 they'll be able to go on our State website and see what

1 the energy performance is of that building.

2 Recently, the U.S. Department of Energy, and
3 Costar Realty Group, which is a real estate information
4 service, executed a memorandum of understanding. And
5 Costar will be including -- so, let me back up. So,
6 U.S. Department of Energy will pull the outputs from
7 benchmarking programs around the country, clean it up,
8 send it to Costar. And Costar will include that
9 information in listings for buildings.

10 So, even though there's no specific time of
11 transaction disclosure requirement, now, anyone who's
12 interested in looking at a building can just go to
13 either our State website, or the Costar page for that
14 building, and see the performance, energy performance
15 information. So, that's -- so, there's no -- nothing is
16 being lost regarding time of transaction.

17 COMMISSIONER MCALLISTER: Let me just chime in
18 there, too. So, I want to just highlight this and note
19 that, as Martha said, we're still developing those regs
20 and sort of working through proposed reg language for
21 the AB 802 program. And, you know, how best to get --
22 so, there will be time-certain benchmarking.

23 You know, fundamentally, benchmarking is good
24 for the building owner because the building owner
25 understands the building, and can make investments in

1 the building. Right? So, and help the tenants, and
2 that sort of helps facilitate the marketplace,
3 generally.

4 But I'd like anybody's -- you know, anybody's
5 sort of ideas about how to get the right information,
6 into the right person's hands at any moment that it
7 might be helpful, including a transaction.

8 And so, I think that we've been working with
9 Department of Energy to kind of push, help that option
10 happen, so that Costar, as the sort of MLS equivalent of
11 the commercial sector, can automate a lot of this. And
12 just make it happen as part of all transactions.

13 So, I think there's a lot of potential power in
14 that. But suggestions that folks have, about other ways
15 that the benchmarking data might facilitate decision
16 making, would be very helpful, as well.

17 So, that's, you know, a different proceeding
18 but, also, very complementary to this one.

19 MR. JENSEN: Great. Thank you.

20 So, we conducted a workshop late in 2015, right
21 after the bill passed to -- that was a scoping workshop
22 to get initial input into the program design. This
23 year, we've conducted two workshops to share draft
24 regulatory language. And, shortly, we'll be submitting
25 our regulatory language to the Office of Administrative

1 Law, for their consideration.

2 And we're looking at the second half of 2017 for
3 the regs to go into effect.

4 Even though the regs aren't going into effect
5 until later next year, the statute gives building owners
6 access to whole building data January 1, 2017. So,
7 while the regs do provide some clarity on exactly how
8 the building owners can make their requests, and what
9 the utilities need to provide, they'll be able to do so
10 right at the beginning of 2017.

11 And then, the tentative schedule, we're
12 proposing in the regulations, is for building owners to
13 start reporting energy use data, for commercial
14 buildings, to the Energy Commission in April 2018. And
15 owners of multi-family buildings, in April 2019.

16 In the second reporting year for each of those
17 sectors, the Energy Commission will use the information
18 reported in that year to make a public website, where
19 people can see usage for buildings, as I mentioned
20 earlier.

21 The data access portion of this program, so
22 the -- Martha talked about the two portions of the
23 program being the benchmarking and the code baseline
24 issue. Even within the benchmarking part, we've got the
25 whole building data access part, and the benchmarking

1 public disclosure part.

2 So, the data access provisions make it possible
3 and, hopefully, much easier for local jurisdictions to
4 create their own benchmarking programs, if they'd like,
5 which are more stringent than the statewide
6 requirements.

7 And we will work with the locals to -- so they
8 can send the data, that they get out of their program,
9 to the State, so we can include it on the State website.
10 And so, owners of buildings, in those jurisdictions,
11 won't have to report twice. They'll just report to the
12 local jurisdiction. Their information gets to us, and it
13 will go on the statewide website. So, that's 1.2.

14 And, lastly, 1.3 is minimum standards and best
15 practices for building performance assessment tools.
16 The first thing, here, is that the Energy Commission is
17 working to establish criteria, and methods, for products
18 that deliver energy efficiency data analytics, using
19 advanced metering infrastructure data.

20 So, this is important and it ties back to what
21 Martha was saying, earlier, about the code baseline.
22 So, this, the Smart meter data gives us more accurate --
23 a more accurate picture of the building's performance,
24 both before and after work is performed. Rather than
25 using a database of assumed, or deemed savings, this

1 shows actual savings.

2 And so, with that, comes -- you know, with the
3 increased granularity comes, you know, we need to make
4 sure we're consistent in how we're using this data. And
5 so, that's the purpose of all of this.

6 2017, we'll establish a test bed for checking
7 out this -- for checking out the infrastructure, and
8 then there will be pilots to test it.

9 Energy audit tools for small and medium,
10 nonresidential buildings. The Energy Efficiency Center,
11 at UC Davis, is developing stakeholders, who are
12 interested in improving the market for improvements in
13 this sector. They're working with high school,
14 community college, and university students to perform
15 audits. And they're working on setting up programs that
16 can be performed -- they're intuitive to use, so that
17 not a lot of training is required to perform the audits.
18 And they'll be available and no, or minimal, cost to the
19 building owner.

20 And, also, as part of that program, they're
21 developing the Building Energy Performance Auditing
22 System, which can be run on a tablet, use a standardized
23 form so that the folks, I mentioned earlier, can perform
24 these audits and everything is pretty standardized.
25 And, so, both the program is both easy to use, and the

1 outputs that the people are seeing are standard, as
2 well.

3 So, that concludes 1.3 and Albi -- and Abhi's
4 going to come up and take it from there.

5 MS. BROOK: So, just wanted to -- if you want a
6 copy of the plan, to work off for the next few hours,
7 could you raise your hand and we'll make somebody go,
8 make us copies. If you already have -- one, two,
9 three -- okay, I can't count that high. Ten, okay.
10 Okay, thank you.

11 MS. WADHWA: Good morning, everyone. My name is
12 Abhi Wadhwa. I'm with the Existing Buildings Unit. I
13 am officially 39 weeks pregnant, so if I run away in the
14 middle of the presentation, do not panic.

15 Okay, so I will cover one more strategy under
16 1.3, the Home Energy Rating Systems. As mentioned in
17 the 2015 plan, we had a very clear vision that we wanted
18 to distinguish asset ratings from assessment tools. And
19 I'm happy to report there's been a lot of good work, led
20 by Martha Brook, from Energy Commission, in this regard.
21 And I wanted to give a quick update on that.

22 So, while all of this will be addressed in the
23 HERS rulemaking, our initial work is to, first, find out
24 what is the feasibility of having a different asset
25 rating approach, in California.

1 So, the work we did in late 2015 was with the
2 Residential Energy Services Network, to address the
3 inconsistencies between RESNET HERS and California HERS,
4 too. As a result of that, we ended up promulgating an
5 energy designed rating in the CalGreen, in the 2016
6 CalGreen standards, and made it consistent with the
7 RESNET 301 2014 Standards.

8 The biggest impact of this was that the energy
9 efficiency and fuel type specified in the reference
10 home, on both of these standards, is now consistent.
11 And that gives us a strong base to start doing similar
12 work for existing buildings.

13 Because one of our visions is we don't want a
14 separate rating system for existing buildings versus
15 newly-constructed buildings. It should be a continuous
16 scale, so that the future ZNE goals are being kept in
17 mind, as well as market confusion is avoided.

18 So, that was some work that we kicked off. And,
19 in mid-2016, we also started working with RESNET on the
20 existing buildings part of this. So, probably in the
21 next update, you'll hear some good news on that. Again,
22 the idea is not to create too many disparate ratings and
23 cause market confusion.

24 So, I'm going to jump to Strategy 1.5. That is
25 our work in Building Energy Efficiency Standards,

1 Development and Compliance.

2 One of the things Energy Commission is
3 considering is to examine more types of buildings in the
4 cost effectiveness analysis for the Building Standards,
5 in the 2019 Standards are to create more comprehensive
6 and nuanced requirements for additions and alterations.
7 We realize that the existing buildings are way different
8 than newly-constructed buildings, and these nuances need
9 to be addressed.

10 Another thing, in response to 802 and 350, we'll
11 begin considering in 2019 Standards, is whether it's
12 appropriate to use a different discount rate for
13 existing buildings. That's not currently being
14 considered in the standards.

15 Because the decision making drivers, from
16 building owners or tenants, are significantly different
17 than what might be in newly-constructed.

18 A little bit of update on water end use
19 efficiency. Last year, Energy Commission adopted
20 standards for toilets, kitchen, lavatory faucets,
21 urinals. And also, towards the fall of last year,
22 tiered standards for shower heads. Our savings,
23 estimated from these -- the details are in the plan.
24 I'm on page 19, if anyone wants to flip over.

25 And then, these standards were also adopted by

1 the California Building Standards Commission, which is a
2 great reinforcement of the work that happens in energy
3 efficiency standards. So, really good to see that.

4 Coming forward, the efficiency standards we are
5 considering investigating, just as a heads up, is an
6 irrigation meters, and looking at the potential
7 standards for irrigation controllers. They are probably
8 expected to be adopted in late 2019.

9 I'd like to speak a little bit about what work
10 is being done to address building efficiency standards
11 compliance shortfall. So, there was a lot of good work
12 done by -- oh, just aligning with the different
13 organizations that are working in this area. The
14 California Building Properties Association, CBIA,
15 California Building Officials, WHPA, Western HVAC
16 Performance Alliance, did a (indiscernible) -- with
17 Energy Commission support. Oh, when was that? Four or
18 five -- four months ago.

19 And started, with our support, and with looking
20 at Action Plan strategies, they started formulating a
21 plan for increasing compliance, especially in the
22 residential HVAC sector. Some of their recommendations
23 are mentioned in the Action Plan. This is page 21. And
24 we have referenced their report, so that might be worth
25 looking at.

1 And, again, if you have any further feedback on
2 this, if you feel like an area has been completely
3 missed by us, or we're not addressing it, we'd love to
4 hear from you. This is a -- savings in this particular
5 niche are huge. We understand that HVAC residential
6 compliance is a big area for capturing savings. So, we
7 look forward to any innovative ideas in this.

8 A quick touch base on plug load efficiency. Our
9 Appliance Efficiency Office are really -- is a leader in
10 California, not just the nation, but I think worldwide.
11 The latest standards they are thinking of adopting,
12 they're considering our computers, computer monitors,
13 and signage displays. It's getting more and more
14 aggressive for them. You know, they've done a number of
15 standards in appliance efficiency, and so to speak, the
16 low-hanging fruit is gone. And now, the focus is
17 becoming more on an integration of software and hardware
18 components.

19 For computer standards, in particular, they're
20 looking to reduce idle mode consumption, by taking
21 advantage of the sleep states in new process
22 technologies.

23 Other standards they're considering are
24 televisions, game consoles, imaging equipment,
25 (indiscernible) -- servers and network equipment.

1 I work closely with the manager in that, and I
2 know they really scratch their heads to be like, where
3 else can we find savings. So, it's really great to know
4 they're on top of this.

5 Just overall, in a broad sweep on appliance
6 standards, they're considering how standby and power
7 factor standards could apply to appliance efficiency,
8 overall. Again, this is like a marriage of software and
9 hardware standards. That would be very interesting to
10 see how they come up with that.

11 And just, incorporating demand response into
12 appliance efficiency, and devices.

13 They've done some great work in enforcement, but
14 I'm going to skip over that. It's like us being
15 hammers.

16 One really interesting effort that came about in
17 the market transformation space was these online
18 marketplaces that utilities created, recently. They are
19 sort of the online version of efficiency shopping, which
20 is hosted through the utility website. I believe we
21 give examples from three utilities, SDG&E, PG&E, and
22 LADWP, in the plan.

23 And what they're trying to do is bring the
24 customer to buy the product through the utility
25 marketplace, which allows the customer to see, not just

1 what is the predicted efficiency of an appliance, but
2 also to be able to apply for the rebate right there.
3 So, it streamlines the process. It makes the shopping
4 experience more simplified, and it establishes that
5 ongoing customer relationship. There's a mention of
6 that in the Action Plan.

7 And I think that was my last strategy. Who's up
8 next?

9 MS. BROOK: Sorry, this Goal 1 is rather large,
10 compared to the other goals, so we split up the talking.
11 Hopefully, to help you out and so you won't get quite so
12 tired of hearing us talk.

13 So, I'm going to cover Strategies 1.7, 1.8, 1.9,
14 and then we're going to open it up for public
15 discussion.

16 1.7 is Local Government Leadership. And there's
17 just a lot going on in this space. We're super excited
18 about local government innovation, and access to
19 resources to really engage with their communities.

20 So, we mentioned -- well, we introduced the
21 concept of a local government challenge, in the 2015
22 plan. And in the update, we basically just announce
23 that we did get legislative direction to proceed with
24 this grant program. And we're going to be rolling it
25 out in 2017.

1 I don't think there's any -- oh, there we go.

2 Thanks.

3 So, the important thing for us, anyway, when we
4 implement the local government challenge, when we
5 originally, you know, thought about it, we really wanted
6 it to be kind of twofold. Resources to the local
7 governments that really are hurting for resources to
8 enforce the building standards, and appliance standards,
9 to some extent. But, really, just getting everybody a
10 lift in terms of the resources they need to think about
11 energy efficiency, and do effective implementation of
12 efficiency.

13 But then, we also wanted an innovative section
14 of the challenge program to really push cities, and
15 counties, and special districts to go outside of the
16 box, and to go after some of that, you know, private
17 capital, and other innovative strategies that aren't
18 happening elsewhere in the State. And we still want to
19 do that.

20 So, the good news is that there's also been a
21 hot, new -- a lot of innovation and forward thinking in
22 the Investor Owned Utility Ratepayer/Local Government
23 Partnership Program. So, they also have innovation
24 points, and extra resources for innovation.

25 And so, we're going to be working with the

1 Public Utility Commission to really figure out where the
2 gaps are, and what really needs to happen, with our
3 grant program, to get incremental, and out-of-the-box
4 type of savings implemented in the State, in local
5 governments.

6 We also have the California Air Resources Board,
7 who's been doing climate action with local governments.
8 And one of the things that they have been doing is they
9 have a Cool City Challenges, where they've been working
10 with their partners, across the State, and Energy
11 Upgrade California, to kind of build a competition
12 between cities. And cities can wave the flag when they
13 win the challenge. And a lot of good -- a lot of good,
14 you know, engagement with their communities are
15 happening through the Cool California City Challenge.

16 There's also been quite a bit of voluntary REACH
17 standards adopted in local governments. So, this allows
18 local governments to show their leadership by requiring
19 new construction, and larger renovation projects, to go
20 beyond the statewide minimum standard, to achieve
21 additional energy efficiency. So, we're really proud of
22 the efforts local governments have been making in that
23 area.

24 We highlight, in this section of the plan
25 update, City of Berkeley's Energy Saving Ordinance. So,

1 they have -- they actually have a requirement that
2 there's an energy audit, or a home energy score produced
3 by every home that is going through a real estate
4 transaction.

5 And we also have been working with partners,
6 across the State, to integrate building energy
7 efficiency savings more centrally in climate action
8 planning that local governments are required to do,
9 under their mandates. And so, we're proud of the effort
10 that we've made with the Open Source Urban Footprint
11 Tool, which is a land use planning tool to embed more
12 granular, more robust estimates of energy efficiency,
13 and energy efficiency potential in a land use and
14 climate action planning scenario.

15 The other thing I'd like to highlight in the
16 Local Government Leadership Section is this idea that
17 energy efficiency can be used for air quality
18 mitigation. So, different Air Districts, around the
19 State, have been piloting investments in energy
20 efficiency as air quality mitigation strategies.

21 And the Coachella Valley Project is one that's
22 been very successful in doing air sealing, and home
23 insulation, at relatively large scale, to mitigate new
24 developer projects in that constrained air district.

25 So, we think that's just an excellent example

1 of, you know, incremental energy efficiency savings that
2 isn't tied to ratepayer programs. So, there's a whole
3 different reason why energy efficiency has value. And
4 we know that energy efficiency has air quality
5 mitigation benefits, and so, we're happy that this is
6 being explored.

7 Now, one of the ways we're going to strengthen
8 this, over time, is to collaborate with the air district
9 body that sets the protocols for how things can be
10 exchanged in a, you know, air quality mitigation
11 framework. So that we can -- they can trust and we can
12 trust that those savings are real, and not paper
13 savings.

14 And so, we'll be working with air districts, in
15 the future, to establish protocols for you can use
16 energy efficiency for air quality mitigation.

17 COMMISSIONER MCALLISTER: So, hey, Martha, a
18 quick question. So, Berkeley has this innovative
19 program, which I don't think is -- maybe it is, but I'm
20 not aware of it being linked to this sort of transaction
21 evaluation, you know, requirement.

22 But they, for a long time, have -- you know,
23 they have a public policy interest in retrofitting,
24 doing earthquake retrofitting, shear walling, and all
25 that, in their homes. And they've used the transaction

1 tax to encourage that. So, you know, the buyer and the
2 seller share this transaction -- the transfer tax. And
3 the half that belongs to the buyer, they can get it back
4 if they spend it on earthquake retrofitting.

5 And so, I've found that to be just a genius
6 policy because it's sort of taking this transaction,
7 aligning incentives, perfectly, to do something with
8 strong public policy benefit. And they have really high
9 participation. And, you know, you have a year to -- you
10 have a year, after you buy the house, to do it. And
11 show then show the City you've done it, and then they
12 cut you a check for your transfer tax.

13 Are you aware of that kind of thing being done
14 for actual upgrades of buildings?

15 MS. BROOK: I don't know of any. But it would
16 be great to hear from our community here, and on the
17 phone, whether they know of such things.

18 COMMISSIONER MCALLISTER: Yeah, so that's like
19 an example of just -- you know, there's real thinking
20 out there --

21 MS. BROOK: Right.

22 COMMISSIONER MCALLISTER: -- and nobody knows
23 sort of everything that's going on. So, really, this is
24 an opportunity to, you know, scrape all the experiences
25 into the bucket.

1 MS. BROOK: Uh-hum.

2 COMMISSIONER MCALLISTER: And figure out what we
3 can then recommend as, you know, going forward in the
4 right way.

5 MS. BROOK: Yeah, and the other -- I think the
6 other benefit of the Berkeley program, they're working
7 with the Bay Area Regional Energy Network to, basically,
8 establish the connection between that home energy score,
9 or home energy audit, and the Home Upgrade Program.

10 So, you know, it's just like a seamless
11 recommendation. You know, if you've got a low score,
12 well, here we've got this upgrade program, you should --
13 we'll help you, you know, get into it and understand
14 your opportunities for improving your score.

15 COMMISSIONER MCALLISTER: Yeah, I mean, I think
16 the place where there -- we need the most creative
17 thinking is how -- you know, so let's say we get a
18 killer benchmarking program operating. You know, we get
19 lots of evaluations of buildings going on. You know, we
20 build it into our existing systems. We have to link
21 that new knowledge, you know, we'll talk about sort of
22 all of the data-related stuff, too. I mean, link this
23 new knowledge into actual -- the right kinds of project
24 scoping, hand-holding support, so that projects actually
25 take place, like out there in the real world, saving

1 real energy. Like that's really, I think, the link
2 that -- you know, and frankly, we're a State agency,
3 we're not as in touch with, you know, the rubber-hits-
4 the-road project level decision making.

5 MS. BROOK: Uh-hum.

6 COMMISSIONER MCALLISTER: So, you know, what can
7 we do, and what can others do, to encourage that to take
8 place? The Local Government Challenge, I think, is a
9 good -- you know, for example, the smaller jurisdictions
10 that really need a little bit of bootstrapping, you
11 know, they -- if they commit to doing something, then we
12 want to just give them a little bit of resources, so
13 they can move forward. And then, help them learn from
14 all the other things that the more innovative, resource-
15 rich, communities are doing.

16 So, that sort of thing. So, really, a lot of
17 this information, and encouragement, and just sort of
18 empowering the local governments to do what they already
19 are supposed to be doing, and want to do.

20 MS. BROOK: Good.

21 COMMISSIONER MCALLISTER: So, anyway, thanks a
22 lot.

23 MS. BROOK: Thank you.

24 Strategy 1.8 is energy efficiency as a clean,
25 distributed energy resource. And this is where we talk

1 about the State's early efforts to use energy
2 efficiency, as a distributed resource, in a utility-
3 procurement environment.

4 And Southern California Edison has launched a
5 procurement pilot for energy efficiency and clean energy
6 resources. And PG&E has proposed to use an energy
7 efficiency procurement avenue, as mitigation for the
8 Diablo Canyon settlement that they're in the process of
9 undertaking.

10 And this, again, is a great opportunity, that we
11 see for new, and incremental, and at-scale energy
12 efficiency, potentially, is if the utilities purchase
13 efficiency. Rather than just go through the ratepayer
14 path to implement rebates and incentives.

15 And again, the challenge here is how do you
16 depend on it? How do you know that it's truly
17 incremental? And, it should be counted as a solid,
18 robust, sustainable resource?

19 And those are the -- those are the iterations,
20 and the discussions, and the determinations that are
21 happening, now, at the Public Utility Commission.

22 So, let us know if there's other Publicly Owned
23 Utilities that are considering procurement, or anything
24 else in this space, that we haven't captured in our
25 update.

1 And then, finally, the last strategy in the
2 State Government Leadership, is a revised strategy that
3 we are calling State Policy Leadership.

4 So, this is where we put everything, that we
5 know about, that's happening, that's affecting State
6 policy, that really isn't captured anywhere else in the
7 Action Plan. And putting it here, actually allows us to
8 track activities over time, and progress over time.

9 And, so, including it -- included in this
10 section is the climate change planning that the ARB is
11 doing, AB 32 Scoping Plan. And now, with SB 32
12 mandating a 40 percent reduction in greenhouse gas
13 emissions over time.

14 Our SB 350, doubling energy efficiency strategy
15 is here, so that we can track those targets over time,
16 in the plan updates, and plan revisions, and identify
17 issues and opportunities to accomplishing that doubling.

18 The California Energy Efficiency Coordinating
19 Committee, which was established by the Public Utilities
20 Commission to get better feedback, and discussion, on
21 the program administrator's rolling portfolio plans, is
22 included in this section.

23 The California Technical Forum, which is trying
24 to streamline and reduce the administrative costs of the
25 ratepayer-funded programs, and to use best practice,

1 open data analysis, and energy efficiency estimate tools
2 is included in this section.

3 And our long-term energy planning strategy, that
4 was in 1.8, we moved to 1.9, because we thought it was a
5 better fit for State Policy Leadership, than
6 procurement. That's really just getting our long-term
7 demand forecasts to be more granular, both in being able
8 to attribute efficiency savings. And also, granular, in
9 the geographic sense, so you can understand where
10 there's local and regional needs for, and opportunities
11 for, energy savings.

12 And then, finally, we have a proposal, that was
13 in the original, 2015 plan, that we're calling, right
14 now, the Energy Efficiency Collaborative. It's the
15 statewide agency leadership, so that the principal,
16 energy-related agencies can convene, and with you, and
17 other stakeholders, to understand where the Action Plan
18 implementation is working? Where it's not working?
19 What we need to do to fix it?

20 And we'll be launching this collaborative, we
21 expect, in 2017.

22 COMMISSIONER MCALLISTER: I want to just say
23 something. Really, I think all of us are really
24 interested in folks' ideas about how this sort of
25 oversight could work well. And I just want to exhort

1 everyone to consider sort of all perspectives on what
2 well means.

3 You know, the last thing we want to do is sort
4 of create another thing, that is a meeting, that lots of
5 people have to go to, that is sort of, you know, even
6 worse because it's sort of undefined and kind of, you
7 know, meant to check some oversight box. Right? It has
8 to be effective. Okay, it has to actually be at a level
9 that, you know, it identifies issues that need to be
10 talked about, and talked about those, with the right
11 people.

12 And so, I think, you know, the level of
13 formality of this thing is a question. You know, the
14 more formal it gets, the more rules apply. And, you
15 know, the more kind of unwieldy it gets, the more
16 difficult it is to kind of get where we need to go.

17 On the other hand, we want the right people in
18 there. So, you know, yet, you want to sort of keep it
19 smallish and manageable.

20 So, there are lots of -- there are lots of
21 different structures that could possibly work, that
22 could be thought about here. But I want to just,
23 really, look at this with a pragmatic approach, and
24 what's going to help, you know, stimulate the right
25 conversations, but not sort of create new bureaucracy

1 that then gets in the way. Right? So, I think that's
2 kind of the tradeoff we're looking for.

3 And, you know, we have a sort of initial idea of
4 what we think might work. But, also, very, very open to
5 comment.

6 MS. BROOK: Okay. So, we're at that point, in
7 the morning, where we want to hear from you. And this
8 is just the blown-up version of that implementation
9 timeline, for Goal 1. And we'll probably just keep it
10 up -- keep it up, in case it helps stimulate discussion.
11 And we're ready to hear from those in the room, first.

12 COMMISSIONER MCALLISTER: So, are we doing the
13 blue card thing? I saw a blue card floating around. I
14 see another one right there. So, maybe --

15 (Off-mic comments)

16 COMMISSIONER MCALLISTER: Oh, we're not. Okay.
17 Well, so, I don't want to -- I mean, not that we have
18 to, I just was wondering.

19 So, Bob, go ahead.

20 MR. RAYMER: Yeah, thank you, Commissioner. Bob
21 Raymer, representing CBIA, and CBPA. And also, wearing
22 my hat, today, as industry's rep on CALBO's Energy
23 Committee.

24 With regards to the simplification and
25 increasing compliance bullet that you've got, very good

1 news. Earlier this year, your staff has kind of taken
2 on, with a vengeance, a desire to reduce compliance
3 documentation, and to also simplify the standards.

4 The CALBO Energy Committee gets together every
5 six to eight weeks. Your staff has attended every one
6 of these conference calls, and they go on for a couple
7 of hours.

8 And in that, there's been a number of efforts
9 that have been moving forward, now. This is probably
10 the first time, in 15 years, I've seen this much
11 advancement of this critical issue.

12 And so, on a very positive note, that's
13 happening. CALBO is now very comfortable with this
14 interaction with staff. They were very skeptical at the
15 beginning.

16 I've got to say, as the industry rep on that
17 Committee, they're no longer skeptical. They know staff
18 means business here.

19 And a suggestion for this is to keep doing what
20 you're doing. As we hit 2017, there's going to be a lot
21 of strained resources, as you really focus on the update
22 of the energy regs. But to the extent that, for these
23 one-and-a-half, to two-hour meetings, that you can
24 maintain that level of staff representation. That would
25 be just fantastic.

1 And also, with regards to compliance, you know,
2 better compliance out in the field, with the passage of
3 Senate Bill 1414, this year, initially, that was going
4 to be a tracking system for HVAC systems. It was an
5 effort to try to seek to improve compliance. Which we
6 know, out in the field, in the L.A. Basin area, I think
7 out of 10,000 units that were sold during a four-year
8 period, that 480 got permits. That speaks to an issue
9 of not only sort of an underground economy, but also,
10 chances are, those ones that didn't get the permits
11 probably didn't get the ducts checked.

12 And so, to the extent that we can work with the
13 Energy Commission, and the manufacturers, and the
14 building officials in addressing the SB 1414
15 requirements, we look forward to doing that.

16 But, once again, staff's doing a great job this
17 year, and we just hope that things keep moving along in
18 that direction. Thank you.

19 COMMISSIONER MCALLISTER: Anybody else in the
20 room, here? Oh, we have one more. Yeah, great.

21 MR. YUNIS: I'll just put it out there that
22 there won't be any need for the blue cards going
23 forward, just FYI.

24 COMMISSIONER MCALLISTER: Is there anybody -- do
25 we have people on the line, and on the web? Just they

1 know how to raise their hand and -- okay, great.

2 Go ahead.

3 MS. GAVRIC: Good morning. Thank you. My name
4 is Jeli Gavric. I'm with the California Association of
5 Realtors.

6 And I just wanted to give a response, real quick
7 perspective, that may not have already been expressed
8 here, earlier.

9 Commissioner McAllister, you did mention the
10 Seismic Transfer Tax --

11 COMMISSIONER MCALLISTER: Yeah.

12 MS. GAVRIC: -- in the Community of Berkeley.
13 And we looked it up, real quick, because representing
14 the entire State, we don't have the ability to track all
15 of the different ordinances, in all the different cities
16 around the State.

17 We found that it's at 1.5 percent. And the
18 median price home in the State of California, and it's
19 not even close to what the cost is in Berkeley, is just
20 over \$500,000. So, you're looking at charging an up-
21 front cost to homeowners, or potential homeowners, of
22 about \$8,000 for a median price home.

23 And that, in and of itself, can create a barrier
24 to home ownership.

25 So, I would just caution this group, and this

1 process, from anyone looking at programs that are
2 successful in very elite communities, especially in the
3 Bay Area, where people tend to have the resources to
4 comply with these things. But let's take a look and see
5 what the rest of the folks in the State of California,
6 the real working class people, what they can do to get
7 into homes.

8 COMMISSIONER MCALLISTER: Yeah. No, I
9 absolutely appreciate that. And, I mean, you know, I'm
10 not even sure we have the authority to sort of -- well,
11 we can recommend anything. But, like, in terms of next
12 taxes, those are a local issue for the most part. I
13 mean, obviously, States can pass laws.

14 But, you know, I personally participated in
15 that, in Berkeley. And, obviously, I'm, you know, not
16 maybe typical. But to the extent that there was already
17 this transfer tax happening in Berkeley, of one and a
18 half percent, you know, half -- .75 percent goes, on the
19 buyer's behalf, into the City. You know, and the City
20 is willing to relinquish that tax if it -- you know, the
21 funds, that accumulate there, to those homeowners, if
22 they use it in a way that has that public benefit.

23 And so, that's an example, I think, of a
24 jurisdiction that, certainly, isn't typical, obviously.
25 But is thinking about how they can mobilize resources,

1 in their real estate market, to get investment done in
2 ways that make sense.

3 MS. GAVRIC: Certainly. And we're very open to,
4 we're very curious to know if there are any other
5 programs out there, that actually don't burden the
6 initial, up-front costs of getting into a home, and
7 keeps people away from that final tick in financing.
8 That down payment part is really hard for most people to
9 come up with. And when you're layering, yet another tax
10 on top of it, which is a cost that must be met and can't
11 be financed, that's a real problem. Thank you.

12 COMMISSIONER MCALLISTER: Yeah, I mean, there
13 are -- so the kinds of things -- you know, I'd love to
14 have your participation on things like how can we, you
15 know, flip that on its head and say, look, if we can
16 decrease the down payment, or increase the top end of a
17 mortgage amount, so that it can be invested in the
18 building and, you know, work in ways -- these programs
19 already exist. It's just the participation is not that
20 great.

21 MS. GAVRIC: We certainly do at the level --

22 COMMISSIONER MCALLISTER: Yeah, and so, if FHA,
23 and all that is not, necessarily, that usable for
24 people. And so, how can we create tools that actually
25 encourage people to get in homes. And, at the same time

1 they get in those homes, to make the investments that
2 decrease their operating costs over time.

3 MS. GAVRIC: Certainly. And there are energy
4 efficiency mortgages which do that.

5 COMMISSIONER MCALLISTER: Yeah, yeah.

6 MS. GAVRIC: They increase the amount of the
7 loans, so that it can be paid off at a longer -- you
8 know, over time, so --

9 COMMISSIONER MCALLISTER: Yeah, so I mean a
10 working --

11 MS. GAVRIC: We'll have to talk about that.

12 COMMISSIONER MCALLISTER: A bunch of
13 knowledgeable people that can say, well, why aren't
14 people participating in that program more, and what are
15 the barriers? And how can it be kind of a no-brainer,
16 you know, and scale that up, so we can channel those
17 sorts of investments.

18 I mean, I think those are the kinds of market
19 relevant solutions that we want, so --

20 MS. GAVRIC: And if the realtors could be, at
21 any point, added to the group that's participating,
22 actively, in this program, we didn't notice, or we
23 weren't named in the document.

24 COMMISSIONER MCALLISTER: Oh, great. Okay.

25 MS. GAVRIC: So, if we could just be added, we'd

1 appreciate it. Thank you.

2 COMMISSIONER MCALLISTER: Great. Thanks, we'll
3 do that. I'm sure there are places where the
4 Association of Realtors would be a partner on some of
5 the strategies in there. Great, thanks.

6 All right, go ahead.

7 MR. NESBITT: George Nesbitt, HERS Rater.
8 First, a reminder that anything earlier than a ten
9 o'clock meeting is hard.

10 (Laughter)

11 MR. NESBITT: Ten o'clock works great for those
12 of us coming on Amtrak, 9:30 doesn't. Neither does
13 9:00. It's like an extra hour and a half early in the
14 day.

15 So, when are we going to realize that the HERS
16 Rating System is the only universal solvent? It's the
17 only system that is compatible with everything, energy
18 efficient mortgage, new homes, existing homes. You
19 know, giving the various rebate programs. Energy
20 Upgrade California, you name it.

21 Yet, we don't seem to realize it. Not perfect,
22 as I'll admit, and we've talked about, ad nauseam, in
23 this room. But it really should be the center of what
24 we're talking about for residential.

25 You point out Berkeley as being a leader.

1 Berkeley doesn't even recognize the HERS Rating System
2 in their New Building Energy System. Yet, five years
3 ago, they proposed using it.

4 Their old -- their old ordinance actually didn't
5 even meet code, Energy Code. So, they've been really
6 behind the times.

7 Compliance. Compliance is miserable. I mean,
8 it's something that really needs to be worked on. We're
9 not -- I mean, as a HERS Rater, I'm not getting calls.
10 We've got mandatory -- sorry, I muted myself.

11 We have mandatory --

12 (Laughter)

13 MR. NESBITT: I'm not telling you where that --

14 COMMISSIONER MCALLISTER: Just for the record.
15 Just for the record, that was George.

16 MR. NESBITT: Mandatory duct testing. Mandatory
17 ASHRAE 622 Mechanical Ventilation Testing, zero call.
18 Zero call. So, compliance is miserable.

19 Disclosure and benchmarking. Have we adopted
20 the new rules, for the new AB -- what is it, AB 1103,
21 now? No?

22 MR. JENSEN: 802. So, no, the regulations are
23 not adopted, yet.

24 MR. NESBITT: They're -- when will they come up
25 for final?

1 MR. JENSEN: June 2017 is what we're projecting.

2 MR. NESBITT: Okay. You know, really important,
3 really important, I think people -- people need to
4 understand their use and have a comparison. And it's a
5 process that has not been smooth in the past, and needs
6 a lot of work.

7 One last thing, our savings goal, and our
8 doubling of our goal, what is that goal? I think in the
9 draft, at one point you mentioned it's now 20 percent.
10 But is that 20 percent of all existing building energy
11 use? So, and where was that goal?

12 Because, certainly, in the CPUC Strategic Plan,
13 for existing residential buildings, we set a target of
14 40 percent.

15 MS. BROOK: So, the SB 350 target setting is
16 happening this year. And we have an obligation to -- I
17 think, for the Commission to adopt those targets in
18 2017.

19 What we're doing right now, if you want to know
20 more information about that, and how we're -- you know,
21 what the baseline is, and what we expect that we need to
22 double, the Commission staff are drafting a key issues
23 for SB 350 implementation, a white paper, now. And we
24 expect it will be released to the public before the next
25 workshop on the topic. So, within a few weeks.

1 MR. NESBITT: Well, it would be nice if that
2 goal was clear.

3 MS. BROOK: It is.

4 MR. NESBITT: Because, in eight years of being
5 very active, I've never seen a goal.

6 MS. BROOK: Well, this is --

7 MR. NESBITT: I mean, stated as a goal for
8 savings.

9 MS. BROOK: Okay. Well, so, the doubling was
10 legislatively mandated the end of 2015. So, we haven't
11 been at it that long.

12 COMMISSIONER MCALLISTER: Yeah. Also, you know,
13 there's never -- so, this has never been a legislated
14 goal. It's always been just a policy goal. And so, in
15 the big bowl, you know, those were very much
16 aspirational, you know, what could we think we could
17 possibly -- you know, possibly do, in the most
18 optimistic version of the future?

19 So, now, the Legislature's saying, okay, double
20 your energy efficiency savings. And so, that sort of
21 ups the level of rigor and formality that we have to
22 use.

23 So, certainly, the PUC, and the Energy
24 Commission, and everybody else, but primarily those two
25 agencies, are in very deep discussions about what a

1 doubling looks like. And then, we will hold ourselves
2 to those goals. Like actually, you know, put together
3 the tools. A lot of what we're talking about is putting
4 together the tools to know what's happening, how we're
5 getting to the doubling, and where it's coming from.
6 And giving that conversation more rigor.

7 That, very much, is in line with the 758 Action
8 Plan, as well as the forecasting update. So, the
9 forecasting efforts that are in the Energy Analysis
10 Division, well, we're breaking down those silos because
11 we're all going to be working with the same kinds of
12 tools and datasets on that.

13 So, it's this evolution towards more rigor, in
14 our implementation of the policies that the Legislature
15 asks us to do, is really in full swing. I'm very
16 excited about it.

17 And then, finally, I would -- once we have a
18 formal goal, I would expect that that would go into
19 whatever the next update -- we haven't really talked
20 about this with the PUC but, logically, one would
21 imagine that that would then go into the next update of
22 the Strategic Plan.

23 MS. BROOK: Uh-hum.

24 COMMISSIONER MCALLISTER: So, at least I haven't
25 had that conversation. But, I mean, I think it's a fair

1 assumption that the Strategic Plan would, then, sort of
2 solidify around the formal goal, once it's adopted. So,
3 that's the process.

4 MS. HERNESMAN: I think it's still morning.
5 Good morning.

6 MS. BROOK: Good morning.

7 MS. HERNESMAN: Barbara Hernesman, and I'm here
8 to -- I'm wearing a couple hats, actually. One from my
9 own company, Synergy Nexgen, which is focused on
10 workforce. And then, also, for Western HVAC Performance
11 Alliance, as a Co-Chair for the Committee. Representing
12 myself, and Liz Jaeger, who is also my other Co-Chair,
13 on the Existing Building Energy Efficiency Action Plan.

14 One, we'd really like to thank you for all of
15 the staff that's made themselves available to the
16 industry stakeholders. We went through a lot of process
17 to put together an exploratory working group that,
18 really, is an exceptional example of what industry
19 stakeholder engagement is. So, your staff has done a
20 wonderful job, and actually put us to real work.

21 One of the things I'd like to say about, and I
22 want to encourage, is the commitment to continue. And
23 that means, on the Energy Commission end of it, also on,
24 well, we call it WHPA. And also, for the CPUC, seeing
25 that we can keep this collaboration and engagement going

1 forward.

2 One of the things that's really important, that
3 came out of an enormous amount of work on the compliance
4 shortfall, in this Committee, was the takeaway is this:
5 enforcement is the issue.

6 We're doing a great job on identifying what the
7 issues are, but how do we get to enforcement?

8 So, I want to really encourage that, going
9 forward the rest of this year, and 2017 through 2019,
10 is, specifically, to try to figure out how we can
11 embrace and get that conversation of enforcement dealt
12 with, so that everybody can get at -- get at the action.

13 One of the things that we were talking about,
14 also, was, in the Action Plan, is when we talk about
15 pilot programs, is making sure that they're properly
16 sourced. And that doesn't mean that that has to sit on
17 the Energy Commission's shoulders, only. The
18 conversation has talked about private and public
19 engagement, and collaborations, of all the different
20 types of funding sources that are out there. And
21 bringing them together, to make sure that we can
22 actually hit the workforce that we're talking about.

23 Many will fall into one line, and won't fall
24 into another. So, how can we work collaboratively,
25 together, to make sure that we make this a comprehensive

1 approach to workforce development, since this on the
2 backs on the boots on the ground to get it done. So, we
3 really need to keep that focus. And we really encourage
4 that that becomes a priority, also, in the comprehensive
5 and alignment for funding sources.

6 So, the other thing I would -- there was one
7 other point that I was saying that I thought, between
8 the discussion today, was your statement, Mr.
9 McAllister, was effectiveness. I can't tell you how
10 many times that term comes up in these collaborations.

11 But it's not just the effectiveness that we're
12 concerned about, is it's a hand-in-hand motion,
13 effectiveness and scalability. We can't get there,
14 unless we figure out what that's going to be and how to
15 embrace that.

16 So, what I want to say is, we're really excited
17 to continue our work with the Commissioner, and also,
18 your staff is exceptional. And so, thank you for the
19 opportunity.

20 COMMISSIONER MCALLISTER: Thanks, Barbara. I'll
21 second that about staff, by the way. I think we're
22 moving in a really good direction. We could always do
23 better. But I think the sort of team mentality and the
24 -- you know, the embracing of what's really a new
25 paradigm in terms of, you know, trying to figure out

1 what works. You know, it's not just about regulations,
2 it's about helping the marketplace function. And I
3 think that's sort of, I think, a mental shift that we've
4 made, and it's really having a big impact.

5 So, thanks to everybody on staff, as well.

6 MR. JENSEN: Okay, folks, it looks like no one
7 has their hands up on the WebEx. If anyone on the phone
8 wants to speak, we're going to unmute the phone lines,
9 shortly. So, please, if you don't want to speak, please
10 mute your phone on your end, so that we don't get your
11 background noise when we unmute.

12 All right, Laith, let's go ahead.

13 MR. JENSEN: So, go ahead on the phone, if you'd
14 like to speak?

15 Okay, second call, anyone on the phone?

16 MS. ETTENSON: Hi, this is Laura Ettenson, from
17 NRDC. I'd like to make a quick comment.

18 COMMISSIONER MCALLISTER: Yeah, go ahead, Laura.

19 MS. ETTENSON: Hi. Thank you, so much, for all
20 of this work. I would just like to note, in particular,
21 in the statewide collaborative, which you know I'm a
22 huge fan of that idea, there are a number of best
23 practices out there that will submit as part of our
24 comments. And agree with you that there's a balance
25 between the legality of being too formal, but also being

1 open enough to allow the right people in the room. So,
2 we work forward to working with you, on developing that.

3 We also will provide some specifics on the plug-
4 load appliance section, where we think there should be
5 strong and more specific goals, and the process by which
6 to achieve those goals. And we'll work, also, with your
7 team, on developing those that are objective, and
8 aggressive, yet achievable.

9 And the other thing I'd like you to consider,
10 just overarching with all of this policy change, is that
11 a number of the things that I skimmed through, in the
12 report, that encourage more connection with the
13 customer-funded programs at the CPUC, which we
14 definitely support, if you get into things, like the
15 statewide Executive Order on State Buildings, then you
16 hit that challenge of the policy. That, if it were
17 mandated, then the utilities, or any of the program
18 administrators, or their third party, or their local
19 government partners, couldn't actually use that, can't
20 claim the savings from that because it has to happen,
21 anyway.

22 So, I encourage those type of policy issues to
23 be of the top priority, when we come up with the
24 statewide collaborate, so that we can really fix the
25 policies that are inhibiting us all working, a lot more

1 seamlessly, together, toward our common goal.

2 And we'll provide more specifics in our
3 comments. And thank you, for the time, today.

4 COMMISSIONER MCALLISTER: Thank you.

5 Anyone else on the phone? Last chance, anyone
6 on the phone? Okay, great. Thank you.

7 MR. YUNIS: All right, hello, everyone. My name
8 is Laith Yunis, with the Existing Buildings Unit. As I
9 said before, I'm going to be going over the Goal 2,
10 Data-Driven Decision Making.

11 You'll see three bullets on the screen, here,
12 but I'm going to kind of go through the update that
13 talks to each one, and then we'll have the slide that
14 talks about the timeline, after that.

15 So, as Eric mentioned, there's AMI data
16 availability, under bullet one, here. Each Investor
17 Owned Utility, electric utility that deployed AMI to its
18 residential customers, have also enabled customer-
19 authorized third party data access.

20 California utilities continue to make progress
21 towards providing online energy management services, to
22 help customers access and manage their utility bills.

23 A second aspect of this first bullet is metered
24 or building mapping. This has come up a lot in our AB
25 802 workshops. And we've, actually, initiated a working

1 group with utilities, the CPUC, and other organizations
2 to try to improve the process and move forward. The
3 idea of mapping meters to buildings, as you can imagine,
4 this is a very important aspect in understanding what's
5 included in that building and how to improve that
6 building.

7 The next one I have is Easing Efficiency
8 Programs' Participation Burden. Program administrators,
9 for California IOU Ratepayer Programs, have taken
10 strides, over the last two years, to reduce time and
11 process requirements for customer participation.

12 You'll be able to find that in the Action Plan
13 update, under -- on page 41, there's several bullets
14 that we go through there.

15 And targeting customers for program
16 participation is detailing program administrators,
17 providing information and support to trade
18 professionals, and energy service providers, to
19 facilitated these industry partner promotions, and
20 engagement of customers with regard to rebate,
21 incentive, and technical assistance.

22 Lastly, on bullet one, behavioral savings. Over
23 the last several years, we've seen California utilities
24 increase behavioral savings programs for their
25 residential customers.

1 For bullet two, one of the items that our staff
2 has been focused on is statewide building identification
3 nomenclature. The Energy Commission is exploring
4 opportunities to leverage geo-spatial, and other
5 relevant data, to develop unique building identifiers.
6 This is similar to a VIN number, a Vehicle
7 Identification Number.

8 But what this will allow is a building
9 identifier to be used, to act as an interconnect of
10 various datasets. Very important, when you have
11 buildings with multiple street addresses, and multiple
12 formats for those addresses.

13 And then, the last bullet, I have four topics
14 that we touch on in the Action Plan update.
15 Standardized rate information from utilities, Department
16 of Energy, and NREL, launch a nationwide -- or, excuse
17 me, a national working group, with the goal of
18 standardizing utility rate data, making it more
19 accessible.

20 This group will evaluate standard formats for
21 machine-reading structures, to collect and transfer that
22 data.

23 Another item that the Energy Commission's been
24 focused on is data exchange protocols. We, internally,
25 call that the Standard Data Dictionary, SDD. It's been

1 a progress, over the last eight years, and it structures
2 the properties of those data fields, and defines all the
3 components of a building, that are evaluating in
4 assessing its energy efficiency.

5 Public-facing energy efficient program
6 information. The CPUC has developed a new, online data
7 processing tool, called CEDARS. It's California Energy
8 Data and Reporting System.

9 This modular design, of the CEDARS platform,
10 enables development of complementary data
11 standardizations, and processing features over time.
12 Such as work papers and evaluation datasets.

13 And, lastly, for the third bullet here, we have
14 energy consumption baselines. Martha touched on it,
15 briefly.

16 CPUC is working with the Energy Commission on an
17 agreement to securely provide 10 years' of IOU customer
18 consumption data, collected for evaluation. This Energy
19 Commission -- with this date, the Energy Commission
20 plans to develop macro consumption models, and publish
21 weather-normalized distributions.

22 So, I kind of recapped the main focus of the
23 data goals into these three main buckets. It starts on
24 page 45. This is the timeline that we were able to pull
25 from that overarching schedule.

1 And what we are looking for is feedback,
2 especially in the later years, as Martha mentioned.
3 Because, as we get out past 2020, we're having a hard
4 time conceptualizing what that would include. So, we'd
5 love to hear feedback on that. And I'll leave this up
6 on the screen.

7 Thank you.

8 MS. BROOK: Any comments, at all, on Goal 2, of
9 the Action Plan Update, from the room?

10 MR. CALDWELL: Good morning. I'm Jim Caldwell,
11 with the California Community College System. And I'm
12 part of a team, of 10, that helps educate students,
13 community college students, for jobs. All the way from
14 the generating plant to the wall socket. And for the
15 natural gas domain, and for the wastewater domains, as
16 well.

17 We also administer the Prop. 39 Workforce Fund.
18 Currently, 60 colleges are training workers,
19 specifically for competencies dictated with Prop. 39
20 implementation.

21 I want to ask you -- well, first of all, let me
22 express my appreciation for allowing me to speak today.
23 I also want to thank you, Commissioner McAllister, for
24 your availability at workshops that have been held
25 around the State, on this very issue.

1 And to the staff, Martha, particularly, for your
2 engagement with the various discussions that are going
3 on around the State, on this topic, as well.

4 I'm going to take a little bit of a different
5 tact here. I know this is about data that relates to
6 buildings, and efficiency in buildings, but I want to --
7 so, what I'm really going to talk about is a little bit
8 in Goal 3.3. Where I'm really appreciative of the fact
9 that we've included an element for data-driven decisions
10 about investment in workforce.

11 Because I think that's really a crucial area,
12 and I want to highlight, a little bit, why that is so
13 crucial. And I'm going to start with a kind of a
14 misdirection here. If you can imagine, all of us in the
15 room, that you're part of -- you're the executive team
16 of a manufacturer of HVAC systems.

17 And does everybody got that? You're a
18 manufacturer, now. You're not in your old job. And, of
19 course, you need data to be able to run your company.

20 And you start looking at the data and you see
21 that there's great upside potential that the market
22 demands 50 percent more product than the sum of all the
23 manufacturers can supply for that particular market.
24 Great upside.

25 But then, you look at your product and the data

1 says that your product isn't really compliant with any
2 particular industry standard. And so, that's kind of a
3 problem. Right? I mean, you'd think that standards
4 have to be there. And 80 percent of the product in the
5 field needs to be retrofitted. That's kind of a
6 problem, too. Right? I mean, that's a big financial
7 challenge. So, what do you do?

8 Well, that's actually the question about
9 workforce, because what I just talked about isn't a
10 manufactured HVAC product. These are HVAC workers.
11 That's the characteristic of our HVAC workforce.

12 Only 50 percent of our HVAC workforce complete
13 either an apprenticeship program, or a community college
14 program or, you know, a private institution training
15 program. Only 50 percent.

16 Two-thirds of the current HVAC workforce, and
17 this is data from Western HVAC Performance Alliance, and
18 others, two-thirds of the current HVAC workforce never
19 completed an accredited program, of any kind.

20 And then, finally, you know, every time we do
21 research on this area, we get surprised. So, we
22 recognize that our friends, in labor unions, have very
23 strong minimum requirements for folks coming out of
24 apprenticeship programs, and in their journey level of
25 training programs.

1 But if you look at the rest of the world, and
2 you see 170 different certifications, industry-
3 recognized certifications on the Western HVAC
4 Performance Alliance website -- we did a study in
5 Northern California and Southern California, over a
6 year's time, the two top certifications that were asked
7 for in job ads were, number one, EPA 608, which is
8 handling refrigerants. And, second, or somewhere in the
9 top five, was a California Driver's License.

10 None of those 170 industry-recognized
11 credentials showed up in the top 20. So, employers
12 aren't really valuing any sort of standard for their
13 workforce. We think that's a real problem. And that's
14 HVAC, that's an area where we have some data.

15 The bigger problem is that we don't have data in
16 a lot of places.

17 So, for facility managers, we were hearing that,
18 you know, industry can't get enough facility managers.
19 So, my team commissioned some research of L.A., Orange,
20 Riverside, San Bernardino Counties, and we found that
21 the annual demand is 3,200 facility managers, 3,200.

22 And the supply, from all the training
23 organizations, is less than 100. So, it's a huge gap.
24 I mean, and the problem is that none of the standard
25 labor market data, you know, from EDD, or BLS, shows any

1 of this. So, how do you invest, you know, if you don't
2 have the data?

3 How many other occupations are like this? Like
4 facility managers, where you don't have a clear set of
5 data for that particular occupation. Control system
6 specialists, commercial energy auditors, energy
7 managers, commercial building inspectors.

8 And then, if you look at electricians, huge
9 category. How many are working in substations? How
10 many are, you know, working residential, and everywhere
11 in between? So, it's a big deal.

12 The other issue is that not only is the data
13 hard to get, there are no common metrics that tell us
14 how well we're doing against the State's energy
15 mandates. I mean, we have some pretty strong data
16 collection and analysis tools at the community colleges.
17 And we'd like to share those with folks.

18 We would like to be part of a leadership group
19 that looks at data, looks at metrics as a way of
20 investing in the workforce. So that, if it is a
21 barrier, if workforce is a barrier to our energy
22 mandates, and it looks like it is, then how do we fix
23 that? You know, what does the data really tell us?
24 What metrics can we use to demonstrate progress toward a
25 higher quality workforce, in making progress towards the

1 State's mandates?

2 Thank you.

3 COMMISSIONER MCALLISTER: Great. That's
4 terrific. Thank you, very much. So, I second many of
5 the ideas in there.

6 But I want to -- I think we've evolved. As this
7 conversation has gone forward, I think we're definitely
8 evolving, I know I am. But I think, you know, there's
9 been a rich discussion, really, since the original
10 Action Plan came out, about, you know, how we can do
11 what we were talking about before, which is to scale the
12 marketplace.

13 And one part of that is not imposing lots of
14 costs on it, lots of additional costs on it. So, people
15 can actually feel like doing a project is something that
16 they can afford, and that they want to do, and it's
17 not -- the hassle factor isn't huge, and all that.

18 But that, also, how do we get to a point where,
19 in doing that, we still focus on quality? And so, how
20 do you balance those two things?

21 And I think the workforce is right in there, in
22 the middle of that conversation.

23 But I don't think -- I mean, I, certainly, don't
24 have the answer. I don't think any one person really
25 has the answer. But how to -- you know, in each market

1 segment, how to sort of find that balance.

2 But I do think, you know, we need to figure out
3 ways to enhance the quality of the service and make it
4 more uniformly high quality, that people are seeing. I
5 mean, we have a branding problem. You know, really,
6 with existing building retrofits, we have a branding
7 problem. People don't -- you know, it's basically like
8 going to the dentist, you know, doing a project in a
9 building.

10 So, we need it to be more like, you know, I
11 don't know, the toy store. I don't know what the
12 metaphor is going to be, right, but have it be a product
13 that people want, desire, and go pursue. Rather than
14 have it be something that they do because they sort of
15 have to, and they don't really want to.

16 Obviously, different, commercial, residential,
17 et cetera. But one version, or another, of that, I
18 think is generally what we're confronting. And so, how
19 do we get -- the scale really needs to be -- we've got,
20 many, many more decision makers have an impression of
21 this activity, that is a very positive impression.

22 And I think what you're talking about -- well,
23 many of the points you touched are sort of along those
24 lines. If we knew more, we could know where we stand
25 and know exactly what to do, to get to that point, to

1 help develop the marketplace in that direction.

2 So, you know, maybe the concrete discussion is
3 to talk about what workforce-related data points, maybe,
4 that we can sort of -- maybe it's a Standard Data
5 Dictionary kind of problem, kind of question. You know,
6 what should we be tracking, you know, as we move
7 forward?

8 But maybe there's -- maybe I missed some of the
9 stuff, because I'm sure I don't know as much as you
10 guys, or Jim.

11 MS. BROOK: No, I think that's a great segue. I
12 was just going to -- this is Martha Brook. I was just
13 going to mention that in Goal 2, we can definitely add a
14 strategy, and introduce it as workforce-related data,
15 and metrics. And, you know, define the metrics, and
16 collect the data to calculate the metrics. And then,
17 the rest of the strategies, related to that, stay in
18 Goal 3, under workforce and workforce --

19 COMMISSIONER MCALLISTER: Yeah, that's
20 interesting.

21 MS. BROOK: But we make the connection between
22 the data and the workforce needs. I think, which we
23 haven't, really, articulated that.

24 COMMISSIONER MCALLISTER: Okay, yeah. So,
25 that's a good way to put it. And then, maybe, Jim, you

1 can help us sort of figure who really is essential to
2 that conversation. I know, you know, Carol Zaben
3 (phonetic) and some others are.

4 MS. BROOK: No, absolutely. And I know, I just
5 have to mention that the Coalition for Energy Efficiency
6 did provide, probably, this exact recommendation. We
7 were unable to process all of the recommendations from
8 the Coalition in this first draft. So, we can
9 definitely follow up with that.

10 Thank you.

11 George?

12 MR. NESBITT: George Nesbitt, HERS Rater. So,
13 data I would like to have, as, you know, a professional,
14 ideally I would have data available to me. So, if I'm
15 working on a single-family house, I would have data that
16 I could compare to similar houses in the area.

17 So, we need data, essentially, ideally, on zip
18 code, city, county and, of course, at the State level.
19 And broken out for things like single-family versus
20 multi-family, obviously, different scales.

21 MS. BROOK: Are you talking about usage or are
22 you talking about characteristics, or both?

23 MR. NESBITT: Usage, first.

24 MS. BROOK: Okay.

25 MR. NESBITT: I mean, just having, in average,

1 kWh and therms, gives you a lot.

2 MS. BROOK: Uh-hum.

3 MR. NESBITT: And, ideally, enough detail that
4 you can compare -- you know, that you're not comparing a
5 1,000 square foot house to a 10,000 square foot house.
6 So, you have, actually, a relatively good point of
7 reference.

8 MS. BROOK: Uh-hum.

9 MR. NESBITT: It's probably also nice to know a
10 little bit about seasonal variation of use. But too
11 much data is not always useful. I mean, just because we
12 have 15-minute data, on a lot of buildings that have
13 Smart meters, doesn't mean that's useful to all of us,
14 all of the time. Although, it -- you know, in
15 aggregate, it might help us understand, you know,
16 certain patterns and whatnot. Although, we know that
17 from the grid.

18 We also have to remember, garbage in, garbage
19 out. The problem with data is, if it's bad, it's bad.

20 And with things, like net metering, you've got
21 behind-the-meter generation, you know longer know what
22 the consumption is, unless you actually, also, know what
23 the production is. So, we have to be careful in that
24 sense of, you know, we're looking at something, but
25 we're actually not looking at the whole thing.

1 Billing month versus a calendar month. The
2 problem is we've -- traditionally, we've been billed.
3 We have a certain billing date, so the data we get is
4 based on the billing period. Yet, when you come to the
5 times of the year where you're seasonal heating, or
6 cooling things, come into play, if you're trying to
7 compare it, actually, on an actual month, you're sort of
8 averaging and trying to make assumptions as to where it
9 happens.

10 Whereas, with -- most of us have Smart meters,
11 now, we should be able to get data in a calendar month.
12 It would make a lot more sense to give data in a
13 calendar month. And it shouldn't be hard to give the
14 cost for the calendar month, as opposed to billing
15 period. And I think that just make -- you know, because
16 so much of what we do, when we're comparing things, we
17 compare it by the month. You know, Energy Star, you
18 know, a lot of things. It's just we usually talk about
19 months, rather than billing periods.

20 And just a comment on the whole idea of pay for
21 savings. And, yes, we want real results. That's what
22 we're ultimately after. The thing is, pay for savings
23 is definitely going to favor larger entities. There's
24 more wasteful energy users. There's, not exclusively,
25 the rich.

1 People, like myself, who are very energy
2 conservative. I mean, I should start heating my house.
3 That way, I can show I can save a lot of energy.

4 And the way this program is getting sold, in
5 part, at the moment, towards contractors, is that
6 potentially their rebates could go up. That, on
7 average, people would actually get a higher rebate under
8 pay for savings, than under the previous program.
9 Although, we still have the whole issue of results we
10 actually achieve versus those we predict. And so,
11 predicting real savings, are we any better at predicting
12 real savings than not save -- than fantasy savings?

13 And I just want to say, we've had access to data
14 for a long time. Online, utility account, PG&E, for at
15 least 15 years. It used to be you could get more data
16 online, than you could get if you put in a formal paper
17 request for someone's information.

18 Now, they're actually giving you even more data
19 online. Like, I think I just got five years' of data,
20 recently.

21 MS. BROOK: Uh-hum.

22 MR. NESBITT: The process of trying to get that
23 data for my own house, for my own account, into Energy
24 Star Portfolio Manager, was extremely difficult. It's
25 just, often, it's our processes are so difficult, you

1 know, that it's time consuming, it's confusing, there's
2 problems, and things don't work. And, for some reason,
3 it's not automatically updating, which I haven't gone
4 back to figure out. But those are just some thoughts.

5 MS. BROOK: Thank you.

6 Anyone else here, in the room, before we go to
7 the phone?

8 Anyone on the phone, Eric?

9 MR. YUNIS: We're going to be unmuting the
10 phones, now. So, if you are remote, on the phone or
11 WebEx, please be sure to mute your line, unless you have
12 something to comment.

13 UNIDENTIFIED PHONE SPEAKER: You know what my
14 problem is --

15 MR. YUNIS: Did you catch a user name, by
16 chance? Again, anyone that's listening remotely, please
17 be sure to mute your line, because we'll get to hear
18 your whole conversation.

19 UNIDENTIFIED PHONE SPEAKER: (Unrelated
20 comments) --

21 COMMISSIONER MCALLISTER: Everyone who doesn't
22 want to talk to the Energy Commission, should probably
23 mute their phone.

24 MR. YUNIS: Okay, I think we got them muted. Is
25 there anyone who has any question or comment?

1 MR. OKADA: Hi, this is Derek Okada, from
2 Southern California Edison. Can you hear me?

3 COMMISSIONER MCALLISTER: Yeah, Derek, go ahead.

4 MR. YUNIS: One second. One second, let me mute
5 one more person.

6 COMMISSIONER MCALLISTER: Wait just one second,
7 we're going to have to mute one more line. Yeah, go
8 ahead.

9 Hold on, just a second, we're going to mute the
10 lines, individually, so that we can hear you.

11 We have three layers of technology, here. We
12 have in-person, we have web, and we have phone. And I
13 think we're wanting to migrate towards web and in-
14 person.

15 MR. YUNIS: That sounds good. Thank you, Eric.
16 Just to keep in mind, we probably had to mute five or
17 six lines there. So, those who are hearing us, please
18 mute your line, if you have nothing to comment.

19 Go ahead, I think it was Derek?

20 COMMISSIONER MCALLISTER: Oh, did we mute Derek?

21 MR. YUNIS: Any questions or comments to the
22 group?

23 COMMISSIONER MCALLISTER: The representative
24 from Southern California Edison, you can go ahead.

25 MR. YUNIS: Okay. Any other comments,

1 questions, on the data-driven decision making goal?

2 COMMISSIONER MCALLISTER: I do want to make
3 sure, so do we know what happened just then, because
4 somebody did want to comment.

5 MR. YUNIS: He's not muted.

6 COMMISSIONER MCALLISTER: Okay.

7 MR. YUNIS: His WebEx sign is not muted. So, I
8 don't know.

9 COMMISSIONER MCALLISTER: Oh, okay. So, the
10 representative from Southern California Edison, I want
11 to make sure you do have a chance. If not now, then
12 before the workshop's over. So, hopefully, we can get
13 you back online.

14 MR. YUNIS: Derek, we'll send you -- if you can
15 hear us, we'll send you a chat message for your
16 question, as well.

17 Are there any other questions or comments on
18 this goal?

19 Great. Thank you so much.

20 MS. WADHWA: Hello, everyone. This is Abhi
21 Wadhwa, from Energy Commission, again. I'll be starting
22 on an update to Goal 3. Thank you to Jim Caldwell for
23 actually kicking that off, and to Commissioner and
24 Martha for leading me right into this discussion.

25 I did want to mention that, like Commissioner

1 said, in this plan update we offer significant changes
2 to the strategy related to workforce alignment. We got
3 great feedback. We had great interactions with the
4 leads and partners under this strategy. And, you
5 notice, a lot of new strategies, four, to be precise,
6 are introduced under Strategy 3.3. And also, looking
7 forward to more, as Martha said. We were not able to
8 take in all the comments, before publishing the draft.
9 But we're looking forward to that, and you'll see even
10 more development on this, in the final update.

11 So, having said that, I'm going to start with
12 Strategy 3.1, on Streamline and Profitable Industry.
13 Again, a lot of movement on this strategy because of the
14 new policy mandates. I'm sure a lot of you are aware,
15 the CPUC's recent decision, in August of this year, to
16 provide and issue guidance to the utilities for the
17 business plan filings happened. And it provided some
18 significant points, which we note here.

19 Most importantly, it states that the default,
20 baseline policy will be existing conditions and not
21 current code, in line with the AB 802 direction.
22 Although, there are a number of exceptions, which are
23 specified. And this is proceeding R-1311005, in case
24 you want to note that. It's available on the CPUC
25 website and sited in the Action Plan.

1 Another thing that the decision mentions is, in
2 an effort to simplify program delivery across the State,
3 which was one of our previous strategies, in addressing
4 that, it asks that all upstream, midstream, and
5 downstream IOU programs be overseen by a single lead
6 administrator.

7 It also asks for piloting at least four more
8 downstream programs, with 25 percent of each utility
9 portfolio committed to these.

10 And, finally, a minimum of 20 percent portfolio,
11 for each utility, must be met through third-party
12 programs, in 2017, which should increase to 60 percent
13 by 2020.

14 As a footnote, third-party programs are being
15 defined as those that are proposed, designed,
16 implemented and delivered by non-utility personnel.

17 In the same strategy, there's also direction
18 from SB 350 to consider hard-to-reach populations. Many
19 of you might already be tuned into that, those
20 workshops, that proceeding within Energy Commission. We
21 are currently -- we've workshopped the Barriers Report,
22 the Disadvantaged Communities Barriers Report, which is
23 up for adoption before January 2017, with
24 recommendations. So, in a few months, please look
25 forward to that.

1 Jumping to Strategy 3.2, again, ties very
2 closely to data-related strategies. This is
3 performance-driven value. We, again, see a lot of good
4 policy coming out of CPUC, in response to the Action
5 Plan, under R-131105. CPUC developed a high-opportunity
6 programs or projects framework, in late 2015, and
7 provided guidance on using a normalized metered, energy
8 consumption validation approach, and embedded EM&V for
9 programs.

10 On page 47, of the plan, you'll see a list of
11 approved proposals, to date, and also those that are in
12 the pipeline. This is a significant step forward
13 towards achieving our previously-adopted strategy, for a
14 performance-driven marketplace.

15 And on the technical side of things, PG&E, and
16 CEC, also, collectively, contributed to the development
17 of Open EE Meter. It's an open source public tool that
18 provides meter-based energy savings feedback. And, PG&E
19 mentions that it plans to use this tool for its proposed
20 residential, pay-for-performance HOPS (phonetic)
21 proposal.

22 So, George, I hope that addresses at least one
23 of your questions, how. It's a beginning but, yes,
24 there are definitely plans for tools on how would
25 performance-based value be measured.

1 So, let me talk a little bit about Strategy 3.3.
2 I'm really glad to have Jim here with us. Really glad
3 that we got a chance to work with all the partners, and
4 leads, in this strategy, using the plan update as an
5 excuse. This time, you'll see way more depth in the
6 strategy, than before.

7 Mainly, what we heard from CCCO, and I think
8 IBEW contributed, as well, is fully -- developing a
9 fully integrated workforce alignment system. And I
10 think Jim was echoing some of that. One that spans
11 across training, program design, and delivery, and
12 breaks these silos.

13 So, our repair programs, again, they're not the
14 only vehicle for this delivery. But, at a minimum, any
15 State mandate should respond to the needs of the
16 workforce, and also develop the opportunities for them.
17 So, it should not be designed in isolation, and we hear
18 that.

19 We also introduce a new strategy on recommending
20 an industry-led forum. Jim, I think you were looking
21 for this, as well. Engaging utilities and contractors,
22 developers, training institutions to come up with non-
23 silo solutions that are leveraging each other's work,
24 creating opportunities for the workforce, making
25 employers aware of what kind of training certifications

1 they should be seeking.

2 So, in total, four new strategies are added,
3 calling for engaging the existing skilled workforce,
4 mapping workforce competency gaps with existing building
5 performance issues. I think this is where we are going
6 to develop another strategy, under the Data Section.
7 What kind of quantification of these gaps and building
8 performance issues is the right, relevant data. And,
9 leveraging existing training institutions.

10 Another strategy that's added, in response to SB
11 350, focused on disadvantaged communities, is to create
12 more opportunities for workers from these communities.
13 We wanted to highlight that as a separate strategy to
14 make sure it doesn't just get mingled in with others, or
15 dropped through the cracks.

16 So, any specific guidance, or any specific
17 comments on that, how you feel that can be more focused,
18 we would appreciate those comments. Thank you and look
19 forward to your comments.

20 MS. BROOK: Do we have any comments on Goal 3,
21 here, in the room?

22 MR. YOUNG: Good morning, Commissioner. My name
23 is Randy Young. I represent Sheet Metal Workers in 49
24 counties of California.

25 I like the direction the plan is going, but it

1 still needs specific guidance and enforcement on
2 compliance. The vast majority of existing building
3 energy efficiency system retrofits do not comply with
4 permit, inspection, and Title 24 compliance.

5 And, for residential HVAC retrofits, industry
6 experts have estimated that around 90 percent of
7 installations do not comply with permit and inspection
8 requirements. One in ten is done right.

9 The lack of compliance with permit, inspection,
10 and compliance documentation requirements is undermining
11 energy efficiency efforts. Contractors that fail to
12 pull and close permits are likely to be unlicensed, use
13 poorly trained, or untrained workers, and to skip
14 acceptance testing, and/or commissioning of systems.
15 And as a result, the likely -- the work is likely to be
16 installed poorly, and to be less energy efficient.

17 The Action Plan recognizes this problem and sets
18 goals. For example, on page 6, the Plan states, "By
19 2018, establish baseline code compliance rate for
20 residential HVAC replacements by 2021, and improve
21 compliance to 80 percent".

22 Also, on page 6, the Action Plan indicates that,
23 "By 2020, retrofit project compliance with Building
24 Energy Efficiency Standards is at 90 percent, and is
25 achieved at a lower cost".

1 Unfortunately, this Action Plan fails to
2 identify specific solutions. This needs to be
3 addressed.

4 SB 1414, signed by the Governor, this year, has
5 added permit and permit closure requirements to
6 incentive programs for HVAC systems. This is a good
7 start. Unfortunately, SB 1414 only focuses on HVAC
8 systems.

9 Electrical systems, which are the number one
10 cause of fires, and create other safety risks, need the
11 same permit closure requirements. From an energy
12 efficiency perspective, the lack of permit closure
13 requirements also diminishes acceptance testing
14 compliance and energy savings.

15 For HVAC installations, permit compliance
16 regulations should an establishment of a system to track
17 central heating and air cooling equipment sales, and
18 installation, in the State, to verify compliance with
19 permitting, inspection, and testing requirements. Thank
20 you.

21 COMMISSIONER MCALLISTER: Thanks for your
22 comments.

23 MR. KOTLIER: Hello, Commissioner. My name is
24 Bernie Kotlier and I'm representing the California Labor
25 Management Cooperation Committee.

1 And I'd like to talk about the engagement of
2 skilled and trained workforce. But before I do that, I
3 want to thank you, Commissioner, for time to speak
4 today. And also, Martha, and the rest of the staff, who
5 have done a lot of good work on the latest draft of the
6 Action Plan. Thank you for all your work on that.

7 The LMCC is very pleased that the Action Plan
8 has added in a goal to address work quality and
9 engagement of a skilled, and trained, workforce.

10 However, the Action Plan needs to provide more
11 explicit guidance on how to ensure energy efficiency
12 retrofits are installed by that kind of skilled, and
13 qualified workforce.

14 2020 is coming up very soon. Yet, as a State,
15 we still have not adopted any requirements to ensure
16 that a certified, high-performing workforce will be
17 engaged to perform energy efficiency retrofits in
18 existing buildings.

19 Workforce education, and training, and similar
20 efforts to create a skilled, and trained workforce, are
21 being undermined by policies that encourage hiring the
22 lowest-cost workers, rather than the lowest-cost
23 qualified workers. The continued failure to adopt
24 skilled and qualified workforce requirements creates an
25 economic disincentive to the firms that invest in

1 training.

2 They are the firms that lose the jobs to
3 contractors, who hire people at minimum wage, or piece
4 work, and those firms do not invest in training because
5 they can't afford to.

6 California is, therefore, subsidizing
7 contractors, that do not invest in training, by spending
8 tax dollars on projects that do not optimize or achieve
9 the expected energy savings.

10 Actions and milestones need to be adopted, to
11 begin meeting the State's work quality goals. The
12 pathways to meet these goals are already set forth in
13 the University of California, at Berkeley's Don Vial
14 Center, Green Economy Report, entitled, "Workforce
15 Issues and Energy Efficiency Programs, a Plan for
16 California Utilities".

17 The CPUC-ordered, ratepayer-funded report, based
18 on three years' of research, sets forth specific tactics
19 that can be implemented to increase the likelihood that
20 energy efficiency measures and installers will be hired,
21 not just based on cost, but also based on skills and
22 qualifications.

23 The report also sets forth recommendations for
24 ensuring energy efficiency programs provide career
25 opportunities to workers from disadvantaged communities.

1 We support incorporating the DVC recommendations into
2 the Action Plan.

3 Consistent with Senate Bill 350, the Action Plan
4 should also require adoption of a responsible contractor
5 policy, that identifies responsible contractors that
6 invest in, and utilize, a trained and qualified
7 workforce.

8 SB 350 requires the Energy Commission to, "Adopt
9 a responsible contractor policy for use across all
10 ratepayer-funded energy efficiency programs that involve
11 installation, or maintenance, or both installation and
12 maintenance, by building contractors, to ensure that
13 retrofits meet high-quality performance standards, and
14 reduce energy savings lost, or foregone, due to quality
15 workmanship".

16 The Action Plan should set forth a near-term
17 deadline for adopting this policy.

18 The existence of education and training
19 programs, alone, are not sufficient to effectively
20 address the lost energy savings, and safety risks,
21 associated with the poorly installed, energy efficiency
22 measures.

23 There needs to be concurrent, corresponding
24 requirements, incentives, and/or inducements to actually
25 hire installers, who have received workforce education

1 and training. While continued workforce education and
2 training efforts are necessary, those efforts need to
3 happen concurrently with the immediate adoption of
4 corresponding requirements, incentives, or inducements
5 to actually hire installers, who have received workforce
6 education and training.

7 As WNT matures, for various energy efficiency
8 categories, the requirements for a skilled and qualified
9 workforce can be refined.

10 However, the continued development of WNT should
11 not be used as an excuse to not adopt skilled and
12 qualified workforce requirements in the very near term.

13 Finally, if we don't ensure effective work
14 quality, California will continue to under-perform in
15 reaching energy savings goals. It will waste ratepayer,
16 taxpayer, and property owner money. The Action Plan
17 needs to ensure that it produces energy savings that are
18 real, not just paper calculations. Thank you.

19 COMMISSIONER MCALLISTER: Thanks for being here.
20 Appreciate your comments.

21 MR. MORENO: Good morning. I'm Eddie Moreno,
22 on behalf of the Sierra Club California.

23 Today, I'd like to address the stranded savings,
24 due to poor installation, issue. The Action Plan's
25 goals should be updated to include a goal to reduce lost

1 energy savings from poorly installed retrofits.

2 While the updated plan notes the SB 350 goal to
3 address the issue, it should be incorporated as an
4 expressed goal in the plan, itself. Without addressing
5 the quality installation issues, energy efficiency
6 upgrades, to existing buildings, will continue to fail
7 to achieve potential savings.

8 Studies have found that actual energy savings
9 from the incentive programs are as little as 51 percent
10 of expected savings, when evaluated post-installation.

11 A study from the -- for the CEC, reported that
12 up to 85 percent of replacement HVAC systems were
13 installed or designed incorrectly, resulting in
14 substantial, unrealized energy savings.

15 Similar gaps, between expected savings and
16 realized savings, have also been found in installations
17 of lighting control systems. These unrealized energy
18 savings can essentially cancel out the benefits of
19 installing more efficient equipment, and a waste of
20 taxpayer and property owner funds.

21 Moreover, the stranded, unrealized energy
22 savings, are often locked in for the lifespan of new
23 equipment or systems, which is often 10 to 20 years, or
24 more.

25 Achieving Senate Bill 350's existing building

1 energy efficiency goals is only possible by ensuring
2 energy efficiency measures are installed, by a trained
3 and skilled workforce.

4 The Action Plan's goals should be updated to
5 include improving installation quality outcomes, to
6 avoid under-performing retrofits, and to adopt policies
7 to encourage or incentivize hiring a trained and
8 qualified workforce.

9 The update contains some language regarded
10 entitlement -- engagement, sorry, of a skilled and
11 trained workforce, but more specific language should
12 be -- more specific strategies and metrics are needed.
13 The first step is to adopt a meaningful, responsible
14 contractor definition, for us in incentive programs, as
15 required by SB 350. A meaningful, responsible
16 contractor definition, should not just require
17 contractors to comply with licensing and permitting
18 requirements, but should also define responsible
19 contractors as those contractors that invest in, and
20 utilize, training and qualified workforce.

21 SB 30 went into effect 10 months ago, and the
22 Commission still has not stated any proceedings to adopt
23 responsible contractor definitions.

24 The Action Plan set forth a specific timeline --
25 should set forth a specific timeline for adoption of the

1 responsible contractor definition. Thank you.

2 MR. ABRIL: Commissioner, thank you very much
3 for allowing me to speak, today. My name's Dion Abril.
4 I'm here on behalf of the Joint Committee on Energy and
5 Environmental Policy.

6 My comment is, the incentive programs need to be
7 aligned with, and support, permit and code enforcement
8 measures. Providing incentives to unlawful
9 installations encourages and exacerbates permit and code
10 compliance problems, and undermines acceptance testing
11 compliance.

12 The IOUs, however, have taken the position that
13 the incentives should be provided to projects, even
14 where the project has not been inspected, and the
15 project building permit has not been closed out.

16 This position is indefensible. The permit is
17 closed out when the construction project has passed
18 final inspection. The final inspection is crucial to
19 public health and safety.

20 Improper installation of hot water, HVAC, and
21 lighting control systems can lead to gas leaks, carbon
22 monoxide poisoning, electrical shock, and fire risk,
23 poor indoor air quality, seismic safety risks, water
24 leaks, and mold risks.

25 In addition, final inspection includes

1 confirmation that ducts have been tested for leaks.
2 Lighting controls have passed acceptance testing. And
3 all other functional performance or acceptance testing,
4 required under Title 24, have been performed.

5 Providing incentives to projects that have not
6 passed final inspection is a guarantee that ratepayer
7 money is being wasted on projects that are often unsafe,
8 and do not provide the energy efficiency savings claimed
9 by the utilities.

10 Requiring customers to pass final inspections
11 does not add a burden. Customers, already, are
12 required, by law, to pass final inspection. Requiring
13 incentive projects to pass final inspection, simply
14 ensures that incentives are not being provided to
15 unlawful projects.

16 Moreover, customers, who refuse to comply with
17 the law, and submit their projects for final inspection,
18 should be deterred from seeking ratepayer funding
19 incentives, since they are creating a public safety
20 risk, and are failing to comply with testing and
21 inspection requirements designed to ensure their systems
22 meet minimum performance and efficiency requirements.
23 Thank you.

24 MR. NESBITT: George Nesbitt, HERS Rater. In 15
25 years, as a HERS Rater, plus or minus, I've only done

1 one duct test in the City of Berkeley, and that was this
2 year. And that's despite having installed, personally,
3 with permits, three systems that should have required
4 it.

5 The paperwork for that duct test took as long as
6 the duct test, itself. It shouldn't quite have taken
7 that long, as it did, but the process is pretty bad.
8 So, process is something we need to really pay a lot
9 more attention to.

10 NSHP is a program where process has also not
11 always worked, where it's taken six weeks to get revised
12 documents back to me, as a HERS Rater, so I could
13 finally sign off, because there's changes. And it just
14 shouldn't take that long.

15 We talked, I don't know if it was in this
16 section, about simplifying the code, making it easier to
17 understand, and whatnot. I don't think you've
18 specifically talked about it, but an area that needs a
19 lot of attention is the forms. We need to realize
20 there's really only three forms, a 1R, a 2R and a 3R.
21 Not 120, or God knows, maybe in 2019, we'll have 500.

22 You know, getting back to compliance, forms are
23 not being asked for. So, permits are being signed off
24 without documentation. And I think, you know, perhaps
25 just the complexity, and the number of the forms, is, in

1 part, an impediment.

2 So, ideally, there would only be three forms.

3 And the section that is relevant to, say, any

4 subcontractor, or even if there were multiple HERS

5 Raters, each section would be signed off by each

6 responsible person, but it would come out in one form,

7 you know, condensed. Not redundant.

8 And the ease of readability of the CF-1R Forms,

9 for 2013, went way down. I used to be able to easily

10 read a form. Not the Energy Pro Forms, as much as the

11 MicroPass Forms. But the current forms are much harder.

12 Everything's got a box and every box is numbered but,

13 anyway -- and I'll just leave it at that, for now.

14 MS. BROOK: Thank you, George.

15 Anybody else on Industry and Workforce? hi.

16 MR. NAKASONE: He was so tall. Ross Nakasone,

17 Bluegreen Alliance for a Coalition of Labor and

18 Environmental groups.

19 Let me start by saying that we join and support

20 the comments of Bernie Kotlier, Eddie Moreno, from

21 Sierra Club, and Dion, from JCEEP. We're part of that

22 Coalition on Energy Efficiency.

23 In short, you know, workforce standards ensure

24 that California's energy efficiency efforts generate

25 real energy savings and, at the same time, create good,

1 family-sustaining jobs.

2 Oh, and I should thank Martha. Thank you,
3 Commissioner, and Martha, and the rest of the gang, we
4 really do appreciate all your hard work on this update.

5 But my main purpose here is to actually express
6 support for the Update Action Plan's inclusion of
7 Strategy 3.310, to ensure that members of minority, low-
8 income, and disadvantaged communities are provided
9 pathways to careers in the energy efficiency industry.
10 We certainly appreciate that.

11 And we're also pleased to see that the report
12 calls on IOUs to create inclusion programs for those
13 from disadvantaged communities. That's very important.

14 As you probably are aware, this is consistent
15 with 350's call for coordination between the Energy
16 Commission, and the CPUC, in developing energy
17 efficiency programs, including workforce development and
18 job training for disadvantaged communities.

19 While the primary goal is energy efficiency,
20 right, of energy efficiency programs is to conserve
21 energy, and that they serve as a significant -- they
22 serve as a significant source of job generation in the
23 State. And these energy efficiency programs invariable
24 affect not just the number of jobs, but also, the types
25 of jobs that are created.

1 And so, programs can also impact the skills and
2 wages of those workers, hired by contractors and,
3 ultimately, who gets those jobs. So, you know, focusing
4 on the workforce in the disadvantaged community
5 component, I think, is very important.

6 But, you know, training programs, which are a
7 great start, don't ensure that energy efficiency
8 incentive measures are installed by skilled workers.
9 Nor, does it ensure that disadvantaged workers,
10 receiving the training, will be hired. And so,
11 intervention on the demand side of the labor market is
12 also needed, as some of my colleagues have mentioned.

13 So, you know, we're excited, at least with the
14 initial language that's in the update to the Action
15 Plan. And, obviously, we welcome your invitation for
16 more detailed guidance on some of those strategies. So,
17 we're definitely going to be taking you up on that,
18 because we feel more is going to be needed in order to
19 really, sort of articulate, successfully, what that is.

20 MS. BROOK: Okay.

21 MR. NAKASONE: So, thank you.

22 COMMISSIONER MCALLISTER: I want to invite all
23 of you, as well, in the Alliance, and more broadly, but
24 to pay attention to the Barrier Study that's happening
25 at the Energy Commission.

1 So, it's not within the AB 758 Action Plan
2 discussion, directly, but it absolutely is related.
3 And, I mean, it is -- you know, the Action Plan really
4 needs to sort of reflect the state of the state, which
5 sort of includes the development of the Barriers Report,
6 that SB 350 asked us to put together.

7 So, that process is moving forward in, roughly,
8 the same timeframe as this update. So, they're not sort
9 of -- it's a little bit to sort of walk across, between
10 the two, in real time. But I think, in one forum or
11 another, you know, preferably both, it would be great to
12 sort of get your views about specific recommendations to
13 help the disadvantaged communities. Both on the, sort
14 of, access to the programs, and the energy savings of
15 energy efficiency, and renewable energy efforts, but
16 also on the workforce side, which SB 350 calls out
17 directly, as well.

18 You know, if you can participate -- when that
19 draft sort of goes public, whenever that is, you know,
20 some number of weeks from now, you'll have an
21 opportunity to chime in, I think directly, there, and
22 have an impact, as well.

23 MR. NAKASONE: Actually, thank you, for that,
24 Commissioner. We have been engaged in the SB 350
25 Barriers Study. And I would note, now, since you've

1 invited the conversation to be opened on that, that it
2 does not include discussions about barriers to, you
3 know, quality jobs. Right? So, you know, this question
4 of jobs quality and access, it has not been included in
5 the Barriers Study. And that, for us, has been quite
6 disappointing.

7 And so, that's comments that we will be filing
8 with the Coalition, and other Environmental Justice
9 groups, to actually include that as part of the Barriers
10 Study. Because at this point, in the draft that was
11 provided earlier, it was not.

12 So, actually, that's why we're very excited
13 about this Action Plan.

14 COMMISSIONER MCALLISTER: Right.

15 MR. NAKASONE: This is the first place that
16 we've seen this job quality access discussion included
17 as part of the planning process. So, if that can be --
18 if I can speak to you on that, as well --

19 COMMISSIONER MCALLISTER: Absolutely.

20 MR. NAKASONE: -- we would definitely love for
21 that to be as part of the discussion regards to the
22 Barriers Study.

23 COMMISSIONER MCALLISTER: Yeah, so that effort
24 is a bit more broad-based, and so it's -- you know, and
25 this, pretty much, is within -- the AB 758 Action Plan

1 is pretty much within this Division, you know, and it's
2 got a previous history. And I think the Barriers is a
3 little bit more broad-based, and it has somewhat
4 different sort of stakeholders that are participating.
5 And I'm glad to hear that you're involved in that. But,
6 yeah, absolutely, I think we should -- I mean, we want
7 to make that as aligned with the 758 work, as we can.

8 MS. BROOK: Uh-hum. And I think, right now, in
9 the short term, it's like you said, it's a little bit of
10 timing challenge. So, we can talk about how much we can
11 directly include Barriers Report recommendations in the
12 plan, versus saying something more generic, like,
13 implement the Barriers recommendations. Right, I mean,
14 it's kind of lame.

15 But we will have to publish to this plan,
16 probably, before the Commission decides on all of the
17 recommendations in the Barriers Study.

18 COMMISSIONER MCALLISTER: I was sort of thinking
19 the opposite, actually.

20 MS. BROOK: Oh, okay, okay.

21 COMMISSIONER MCALLISTER: I was sort of thinking
22 that maybe we could work to get some of what's in the
23 Action Plan into the Barriers Study.

24 MS. BROOK: Oh, okay. Okay.

25 COMMISSIONER MCALLISTER: I mean, you know, I'm

1 just sort of speaking out of turn, here, so --

2 MR. NAKASONE: We would definitely welcome the
3 inclusion of job quality and access into, obviously, the
4 Action Plan Update.

5 MS. BROOK: Okay.

6 MR. NAKASONE: But also, of course, the SB 350
7 Barrier Study.

8 MS. BROOK: And we can talk about that. Thank
9 you so much.

10 MR. NAKASONE: Thanks very much.

11 COMMISSIONER MCALLISTER: Thank you, appreciate
12 it.

13 MR. CALDWELL: Jim Caldwell, California
14 Community Colleges. This update is really timely. This
15 may be a very unique opportunity. Because of all of the
16 things that are happening, SB 350, AB 802, Title 24,
17 2016 version, the business plan filings by the
18 utilities. So, there's a lot of things in alignment
19 there.

20 If you look at funding, the Workforce Investment
21 and Opportunity Act is requiring the Workforce
22 Development Boards, across the State, to be more focused
23 on sectors, and how their money gets invested in
24 workforce opportunities for sectors.

25 The California Community Colleges, in

1 legislature, is allocated \$200 million for career
2 technical education. Not all that, of course, is for
3 energy. But, you know, we can access part of that. And
4 then, of course, is our ongoing investments by ratepayer
5 funds and utility programs. So, there's that.

6 And then, there's alignment of the stakeholders
7 that's happened. I'm part of the Coalition, that was
8 mentioned earlier, and very happy to be a part of that.
9 Extended beyond that, we have partnerships with BOMA,
10 Building Owners and Managers Association, with IFMA,
11 with the Association of Facility Engineers. There's, of
12 course, Cal TCP, and WHPA. And, I could go on and on
13 and on.

14 And many individual stakeholders, who have come
15 together and said, we think workforce is a problem and
16 we want to participate in finding a solution.

17 So, this is a really great opportunity, I think,
18 that this update can be based on, and can leverage all
19 of these -- this convergent -- convergence of forces to
20 a great advantage.

21 Now, one thing, though, that's interesting to
22 me, is that in the draft update, of the Action Plan,
23 there's an item in there called "Industry Action Plan".
24 So, to me, it seems like you're creating the platform,
25 you know, the policy platform for us to come together,

1 with an industry-led alliance. And which, I think,
2 Commissioner McAllister, has been your theme for quite
3 some time now.

4 And I've asked -- I've asked people, okay, and
5 starting with the IOUs, right? You know, you're
6 getting a lot of money, you know, \$30 million a year.
7 Do you own the workforce challenge for energy
8 efficiency? And they said, well, no. Of course, we
9 can't own it. It's much bigger than we are.

10 I mean, it's hard to imagine something bigger
11 than the utilities, but I guess there is something out
12 there.

13 You know, and I ask pretty much all the
14 stakeholders, nobody says they own it. And that makes
15 sense that you can't.

16 But what can own it is an industry alliance, an
17 industry collaborative that really takes hold of this
18 and says, we, collectively, want to solve this problem.
19 And whether that requires a new policy, whether it just
20 requires, you know, extraordinary will, whether it
21 requires funding, whether that could be part of these
22 funding streams that are happening today, I just don't
23 know.

24 But, to me, that's really, in my opinion, on the
25 workforce side, that's one of the greatest opportunities

1 that we have is to build this industry collaborative.
2 And we have a lot of evidence that things like this
3 work. I mean, for us, for the utilities, for the
4 Workforce Development Boards, and, certainly, for the
5 labor unions. You know, there are examples where this
6 works extremely well. And so, we're not actually flying
7 blind here. We've got a lot of experience in this area.

8 And, of course, we, the Community Colleges,
9 would like to be a part of the leadership in taking this
10 collaborative forward. So, thank you.

11 COMMISSIONER MCALLISTER: Thanks. Thanks a lot,
12 Jim.

13 And, I totally agree. I mean, a lot of times
14 when people talk about, oh, you know, industry-led
15 effort, it really sort of is a -- it's more of, maybe, a
16 libertarian kind of thing, where it's like, you know,
17 get the State out of it and everything.

18 I want to just be very clear, that is not where
19 I'm coming from, exactly. Right? I mean, I think
20 it's -- we're really coming from a recognition that, you
21 know, absolutely, the State, and local governments, need
22 to have muscular policy where it is absolutely needed.
23 Where there's a market failure and where there's really
24 a need to address some common issue that nobody,
25 individually, is going to step in and solve. Right.

1 And that's -- we always look for opportunities where we
2 can sort of help move the ball along those lines.

3 But on the flip side of that, where a State
4 doesn't have a lever to do something directly, why would
5 we try? And I think, there's kind of the place where
6 industry alignment and, you know, branding, and figure
7 out what the customer -- the market segmentation, all
8 the things that markets are good at. Right? And that
9 aren't sort of government's best role. I think needs to
10 step into that breach. Right?

11 And so, I think what you've just said is really
12 powerful. That, you know, there's a -- what's it going
13 to take to sort of get all the pieces put in place for a
14 quality workforce, to put together a quality product, at
15 a price that people -- that, you know, whoever the
16 market is, whoever the customer is can actually do. And
17 then, feel that they've been well-served.

18 You know, and I think that workforce is right
19 there, in the middle of that. And, I think, you know,
20 I've sort of, you know, tried to look at this from a lot
21 of different perspectives over the last few years, you
22 know, and certainly haven't come up with the silver
23 bullet here. But, I guess, have just increased my
24 appreciation of how central the sort of -- you know, the
25 actual project, and the touch on that project, with the

1 customer, is, because it is fundamental to every single
2 project. Right?

3 So, I guess, you know, I really want to
4 encourage this discussion. And, you know, really ask
5 people to put all their creativity on the table, to
6 figure out what the path looks like, and all its
7 elements. Because it isn't just a money problem. It's
8 a kind of a -- you know, it's a consistency and,
9 ultimately, kind of a branding problem. And we want the
10 workforce to, really, play a part in that.

11 MR. CALDWELL: That's really key. Thank you,
12 sir. You mentioned alignment. I mean, there's a lot of
13 money there. There are a lot of different training
14 programs, and agendas, and workforce development
15 efforts. None of these are linked to each other.
16 Right? So, there may be overlap, there may be big gaps.

17 And, from what I see, very little of this is
18 linked directly to SB 350, or even to the current energy
19 mandates. You can't really draw a straight line between
20 many of these initiatives and what it takes to implement
21 our State's energy mandates.

22 So, I really appreciate your comments. And, you
23 know, government leadership in this would really be
24 appreciated. If there's funding needed, maybe. But, you
25 know, there's a lot can be done to leverage what's

1 already out there. Thank you.

2 COMMISSIONER MCALLISTER: Yeah, for sure. And
3 I'm not talking about taking my hands off of this. I,
4 actually, want to be more involved. We need to know
5 kind of where it's helpful and where it's not helpful.
6 You know, so I don't want to step on lots of toes. I
7 want to sort of let the people, who know what to do, get
8 out there and do it.

9 MR. CALDWELL: Thank you.

10 MS. HERNESMAN: So, Barbara Hernesman, from
11 Synergy Nexgen. And that was a great lead in. Perfect.

12 What I really want to stress here, in looking at
13 what's up here on the board, is 2019, your goal of 2019.
14 I strongly suggest that you embed that into your 2017
15 pilot programs. That gives you an opportunity to see
16 what works and what doesn't work, get your best
17 practices in suit. So, when you come to 2019, you're
18 well on your way, and then we should have all the
19 hiccups out.

20 There's a lot of us, in this industry, and WNT,
21 who can find very innovative ways to meet this goal.
22 So, I strongly suggest that you move that up.

23 The other thing I would say is this, and this
24 has been talked about in different arenas across the
25 State, and that is, it's time for inter-generational

1 workforce. And what I mean by that is we've got a lot
2 of well-seasoned folks out there, who know what's going
3 on. We're going to all, at some point in time, you
4 know, retire. And we'd like to pass on that knowledge
5 to the workforce.

6 So, when we look at it, we look at it product,
7 technology, and workforce. They're all one. It's not a
8 separate entity. It's not a separate pathway. It's an
9 integrated pathway.

10 So, we really want you to make an effort, in
11 your pilot programs, to enforce that inter-generational
12 relationship, because that's where we're going to get
13 our scalability, and we're going to get our
14 sustainability in workforce pathways.

15 So, that's a couple of the main things that I'd
16 like to bring up. And I highly suggest, if we can embed
17 those into now, it would be great. Thank you.

18 COMMISSIONER MCALLISTER: Thanks, Barbara.

19 MR. THOMAS: Hi. My name's Steve Thomas, and
20 I'm the Director of Training for Stationary Engineers,
21 Local 39.

22 Stationary Engineers represent the people that
23 maintain the facilities. They take care of major
24 equipment. They take care of facilities, all State-run
25 facilities, including this facility. We also provide

1 services for commercial buildings, industry, hospitals.

2 And I'd like to talk to you, today, about the
3 need for additional, more skilled training, and, also,
4 certification.

5 So, in the Action Plan, it talks about the State
6 of California facility managers and building managers
7 become familiar with and running their buildings
8 efficiently. Well, where the rubber meets the road is
9 they ask the Stationary Engineers to go and perform the
10 job.

11 COMMISSIONER MCALLISTER: Are you affiliated
12 with any umbrella, sort of labor union, labor group
13 or --

14 MR. THOMAS: Well, we all are here, also, with
15 the Commission -- or the Coalition that have been
16 talking.

17 COMMISSIONER MCALLISTER: Okay.

18 MR. THOMAS: So, we're not -- we believe in
19 everything that they're doing. Of course, everybody has
20 a little bit of their own agenda.

21 COMMISSIONER MCALLISTER: Yeah.

22 MR. THOMAS: And so, I'm supporting them, but
23 I'm also bringing up the issues for the Stationary
24 Engineers.

25 COMMISSIONER MCALLISTER: Okay, but you have

1 your own locals that are sort of scattered around the
2 State or --

3 MR. THOMAS: The State of California represents
4 all the Stationary Engineers, for the State of
5 California.

6 COMMISSIONER MCALLISTER: Okay, I got you. I
7 got you, okay, thanks.

8 MR. THOMAS: So, not only the Stationary
9 Engineers, also, which is Bargaining Unit 13, also
10 Bargaining Unit 12, which includes all the trades
11 members, electricians, plumbers, carpenters.

12 And so, to provide those services, your
13 electricians, and the people to take care of the HVAC
14 equipment work in tandem.

15 And, of course, SB 350, when it's coming up, it
16 talks about putting together a workforce that has the
17 skills and ability to provide the best training
18 available.

19 So, when SB 350 came through, it said that
20 that's what they need. But there isn't a true
21 certification program that SB 350 talks about. They
22 said that there has to be one. The managers and the
23 supervisors need to have knowledge of it, and the
24 workers have to be skilled in it.

25 Well, Stationary Engineers is way above that

1 threshold. We've come out with a textbook, which we
2 teach in our class. And it's Stationary Engineers
3 Energy Conservation. So, it's very comprehensive. And
4 we spent years putting this together. We put this out
5 in 2012.

6 And if I could, I'd like to leave this with you,
7 with the Commission. I have a couple copies here.

8 COMMISSIONER MCALLISTER: Man, it's awesome.

9 MR. THOMAS: So --

10 COMMISSIONER MCALLISTER: It's less than \$50,
11 right?

12 (Laughter)

13 COMMISSIONER MCALLISTER: I'm going to gift this
14 to the Energy Commission, so just FYI, on the record.

15 MR. THOMAS: Yes. To you, it's free. Today,
16 only. No.

17 So, you know, we have a Joint Apprenticeship
18 Committee, the State of California has recognized, for
19 the exact job functions which SB 350's looking for. We
20 train thousands of stationary engineers, that take care
21 of all these buildings.

22 You've heard about other people. They work with
23 the State, also BOMA. We work directly with BOMA. We
24 have the largest contract with BOMA, with thousands of
25 engineers maintaining these facilities.

1 What we're lacking is a recognized certification
2 program. Now, we have the skills and ability, in our
3 training department, to put on this training, and we
4 have. And we've had multiple classes.

5 The thing is, they can take this class all day
6 long, will the State recognize some type of program?

7 Currently, I don't think there is one. So,
8 we're offering this. So, you can use this as a basis
9 or, if it needs improvement, we'd love to work with you,
10 or a subcommittee to be able to put that together. We'd
11 be really happy to do that.

12 I think it's so comprehensive that you will find
13 that that will put you, you know, most of the way to
14 where you need to go.

15 So, we need that incentive of -- we don't --
16 we'd love to put on a lot of training, and we do, but
17 will the different agencies actually look at that and
18 say, yes, that's what meets the criteria set forth in
19 the Bill? And that's what we're lacking.

20 So, in closing, I'd just like to say that for
21 the language that's in the Act, that if it's going to
22 move forward, there has to be quantitative, some kind of
23 certification, or understanding that this meets the
24 criteria. And if it does, we'll put that training
25 together. We already put the training together, it's

1 just not recognized, yet.

2 You know, if we can do that, we will produce the
3 people that you need to provide the services.

4 COMMISSIONER MCALLISTER: So, yeah, let's -- I
5 think this is definitely good to inject into the
6 conversation. I mean, you could say all sorts of -- but
7 I think -- before, we heard a comment that was sort of
8 similar, you know, sort of recommending a facility
9 manager focus. But I think, you know, we're talking
10 about getting energy savings from retro commissioning,
11 from demand response, from a whole bunch of stuff that
12 really are systems and buildings that somebody's got to
13 take care of, and curate, and optimize, and all that
14 kind of stuff. So, there's clearly value here. So,
15 let's just keep the conversation -- keep you within the
16 conversation, so we can figure out how to sort of fit it
17 all together.

18 It looks like Martha --

19 MS. BROOK: Yeah. I mean, to me, this will be
20 one of the first assignments of an industry
21 collaborative is -- you know, because we heard you,
22 clearly saying, that you need a specific certification.

23 But then, we've also heard that there's hundreds
24 of certifications that are not recognized. So, how do
25 we like just not create the 101st one? Right? So,

1 that's where I struggle. I don't know that space well
2 enough and I think the industry group, that focuses on
3 needs and strategies to meet those needs, will be really
4 important for us.

5 I just don't think the Energy Commission can do
6 it without the industry participation. I don't think we
7 have enough domain knowledge, I guess I'd say, in the
8 workforce certification world.

9 MR. THOMAS: Clearly, the State already
10 recognizes us through our Joint Apprenticeship
11 Committee. And the State of California has apprentices
12 in our program, to provide those exact services. We'd
13 love to train all of them. We already train them,
14 constantly. We have training throughout Northern
15 California, Sacramento, San Jose, San Francisco, Los
16 Angeles, San Diego.

17 MS. BROOK: Uh-hum.

18 MR. THOMAS: So, you know, we're here to do that
19 job. The State's already recognizes us. I don't think
20 it's that far of a jump to say that, you know, we're
21 already part of the program.

22 Actually, today, they're trying to wrap up
23 Bargaining Unit 13, and they've set aside a subcommittee
24 to look at the training. So, you should be aware of
25 that.

1 MS. BROOK: Uh-hum.

2 COMMISSIONER MCALLISTER: Well, so, it sounds
3 like something that we -- the first step, for us, would
4 just kind of to be get up to speed on all the players,
5 and what's the state of this is. And then, sort of
6 figure out where to go from there.

7 MS. BROOK: Uh-hum, yeah.

8 COMMISSIONER MCALLISTER: Yeah.

9 MS. BROOK: Yeah, thank you so much.

10 COMMISSIONER MCALLISTER: So, thanks for being
11 here. So, your participation in that is crucial, to
12 kind of help us, help us get up to speed. Thank you
13 very much.

14 MR. THOMAS: All right, thank you.

15 MS. BROOK: All right, if there's no other
16 comments in the room, we have Charles Kormani, on the
17 phone, who wants to say something.

18 MR. KORMANI: Yes. Hello, my name is Charles
19 Kormani. I'm the Executive Director of Efficiency First
20 California.

21 And this is kind of a twofold comment about the
22 workforce education and the permits. One thing that
23 needs to be addressed is workforce education and
24 training for the code enforcement officials.

25 Now, one thing I've seen, constantly, is being

1 in the field and having all the paperwork in place for a
2 permit, or an inspection, and the building inspector
3 doesn't even want it.

4 I have also spoken with local, smaller,
5 municipal entities about code enforcement, and their
6 common response is they don't have the resources
7 available, basically, human resources, to enforce the
8 existing regulations.

9 I think that we need to really pay attention to
10 the fact that the difference of a permitted job to a
11 non-permitted job can easily be \$1,000 difference in
12 price. So, I really have an issue with the fact that we
13 have this program and, you know, I understand the IOUs'
14 position of not wanting to be the permit police, and all
15 of this, and requiring permits as part of participation
16 in an incentive program.

17 But I think that, if we have regulation that's
18 in place, currently, particularly even in relation with
19 duct testing, with HVAC, and it's basically being
20 overlooked because of a cost comparison, so it's cheaper
21 to not do it, and there's basically no penalty to those
22 who are doing it. And part of the reason is because the
23 code enforcement people don't have the resources to
24 enforce it.

25 As we go further down this path, what are we

1 going to do to address this? When you provide other
2 things, how are we going to enforce these regulations
3 and how are we going to support the community, who is
4 there to enforce these regulations?

5 COMMISSIONER MCALLISTER: Great, thank you.

6 MS. BROOK: Thank you, Charles.

7 Anybody else? Is that it, Laith?

8 All right, so we're going to try the phone one
9 more time and, hopefully, no news from grandmothers, or
10 anything. But, yeah, so if you have a comment on the
11 phone, now is your chance. Please mute your phones, if
12 you don't need to speak with us.

13 (Irrelevant comments from the phones)

14 MS. BROOK: Okay.

15 MR. YUNIS: There's a Janelle Jackson, I just
16 saw pop up.

17 Janelle, are you there?

18 Derek, are you there?

19 MR. OKADA: This is Derek.

20 MR. YUNIS: Yeah, you can go ahead.

21 MR. OKADA: Okay. Hi, this is Derek, from
22 Southern California Edison. So, I just wanted to
23 comment on the last strategy, regarding behavior
24 programs. I saw that the goal was by -- the milestone
25 of 2025 to expand the scope of behavior programs.

1 I just wanted to let you know that, recently,
2 the California IOUs hosted a Behavior Summit, to explore
3 expanding the behavior definition. And this is largely
4 in part because of the current definition's design, that
5 it's limiting the scope of behavior program's reach,
6 because of the set aside for a control group.

7 So, by 2025, the California IOUs may be not able
8 to go deeper into behavior programs, unless the
9 definition is altered to allow other methodologies.

10 MR. YUNIS: Okay, thank you.

11 COMMISSIONER MCALLISTER: Thanks for that.

12 MR. JOHNSON: Alrighty, let's move on to Goal 4,
13 then. So, I was just going to say that I printed out a
14 couple copies of the draft update, that are in the
15 foyer, if you don't have one. There's also bottled
16 water, if you want it. I know we've been all sitting
17 here since this morning. So, we appreciate it.

18 MS. BROOK: Can you introduce yourself?

19 MR. JOHNSON: Yes. Daniel Johnson. I'm part of
20 the Existing Buildings Unit. I've been working on this
21 update, and also, the first Action Plan, as well.

22 So, I'm just going to talk about Goal 4. It's
23 on page 55, if you have it. Pretty much, we're just
24 going to cover real estate value.

25 Right now, with the increasing engagement in the

1 real estate market, so the year 2016 saw the development
2 of the utility companies' efforts to increase the role
3 of energy efficiency in the real estate market.

4 Working groups and studies, funded through the
5 statewide Codes and Standards Program, highlighted the
6 potential for increasing awareness of, and creating
7 market demand for, energy efficiency during real estate
8 transactions.

9 The preliminary results of a survey, conducted
10 by Build It Green, in collaboration with Oakland
11 Berkeley Association of Realtors, and the California
12 Regional Multiple Listing Service, revealed that 70
13 percent of realtors are interested in using energy
14 efficiency or green features as a selling point.

15 The survey results also identified a lack of
16 understanding of home performance, as difficulty in
17 confirming sellers' claims as the top challenges facing
18 the market for green homes.

19 Moving on to the energy asset ratings, with the
20 real estate industry. The Real Estate Standards
21 Organization, or RESO, the USDOE, and MLS's across North
22 America, are well-equipped to integrate energy
23 efficiency data into real estate listings.

24 However, the following challenges remain.
25 There's few existing properties that have performance

1 rating data for the home appraiser to review, for
2 comparables, making it difficult to ascertain the market
3 value of the home. The existence of multiple rating
4 systems makes it difficult to compare properties. And,
5 sellers are hesitant to spend money, to obtain a rating,
6 as the market demand for energy-efficient properties has
7 not yet scaled, sufficiently.

8 So, standardization of performance ratings
9 continues to be important. And making the rating data
10 available to both MLS, and assessor tax databases, is
11 critical to facilitating data flow into the market.

12 There is a need to create and embed tools,
13 within MLS databases, to cross-map disparate ratings.
14 Development of such tools is recognized as a new
15 strategy, in this update.

16 The last piece of 4.1 will be the energy and
17 water cost savings. So, another segment of clean energy
18 data that will need to be brought into the MLS databases
19 is energy storage. All right, for example, demand for
20 properties that store locally-generated energy, or take
21 advantage of off-peak energy costs. Information on air
22 quality and water efficiency are also valuable, and will
23 require standardized data terms for effective
24 communications within real estate markets.

25 So, the CPUC has developed and approved a Water

1 Cost Calculator that estimates embedded energy in water,
2 to support water energy nexus programs. And
3 improvements to the calculator are planned for late
4 2016.

5 Moving on, the same table here, we've got on
6 page -- page 59, the last sub-strategy for Goal 4 is the
7 targeted data and research-driven ME&O (phonetic).

8 So, right now, Energy Upgrade California is
9 well-established as a marketing platform for all demand
10 side programs in California.

11 According to their recent evaluation, the
12 program has an awareness rate of 20 percent, meaning 20
13 percent of Californians recognize the brand, once given
14 cues about it.

15 Which is true because, just yesterday, my
16 girlfriend pointed out this bear on her laptop. And I
17 said, oh, yeah, I actually work it. And she goes, "No
18 way". So, it's on the internet.

19 So, in 2016, the CPUC has been working to take
20 EUC to the next level. According to the CPUC, ME&O
21 should play a significant role in meeting the State's
22 ambitious greenhouse gas reduction goals.

23 To that end, the CPUC has selected a program
24 administrator to continue implementing EUC. The CPUC
25 will work with the program administrator to create an

1 integrated, five-year, ME&O roadmap, that will encompass
2 marketing strategies for EUC, and other program
3 administrators.

4 Inputs into the five-year roadmap include this
5 Action Plan update, the energy efficiency business
6 plans, the marketing plan being developed for time-of-
7 use rates, and other demand side proceedings.

8 One-year action plans are being developed, that
9 will provide detail to the five-year, ME&O roadmap.

10 The challenge for Energy Upgrade California will
11 be meeting SB 350's goals of doubling efficiency.

12 Currently, the statewide program is separate from the
13 utility ME&O programs, due to the geographic limitations
14 of the IOU service territories.

15 Efforts need to be integrated to create a more
16 seamless presence in the market.

17 Lastly, we have the Public Awareness Campaign.
18 And so, stakeholders have encouraged the Energy
19 Commission, and the CPUC, to include a public education
20 and awareness campaign in statewide ME&O efforts.

21 Similar to what drew public attention to the
22 drought, Californians need to be exposed to clear
23 messages, from multiple media channels, that communicate
24 the urgency of the role that energy efficiency plays in
25 combating climate change.

1 This campaign should inform and demonstrate that
2 saving energy is smart, cost effective, and beneficial
3 for them, the State, the country, and the world. The
4 campaign, which should be developed with input from
5 stakeholders, must be a simple, understandable message,
6 that will lead consumers directly to utility programs in
7 their local area.

8 So, that's all I got. Nice, short, and sweet.
9 We'll move on to discussion.

10 MS. GAVRIC: Good afternoon. This is Jeli
11 Gavric, again, with the Realtors. Thank you for having
12 me here, today.

13 I just wanted to bring up a couple of points on
14 this issue, that haven't been highlighted in this
15 document, but I do believe these need some serious
16 attention, as we move forward with this program.

17 First of all, I wanted to just mention, like
18 from a righting perspective, it's not really 70 percent
19 of realtors that are interested, it's the 70 percent of
20 realtors that were polled. And so, we don't know what
21 that universe of people looks like, but we have 190,000
22 members. And, anyways, just letting you know --

23 MR. JOHNSON: Okay.

24 MS. GAVRIC: -- that that polling could have
25 been done in a unique environment, so we're not sure

1 what that data looks like, when spread out across our
2 entire population. Just letting you know.

3 MR. JOHNSON: Okay.

4 MS. GAVRIC: But, more importantly, is the
5 valuation of green features. And I didn't come here to
6 nitpick your report. I came here to talk about
7 something that's really important. And I wanted to echo
8 the concerns of the Sierra Club, and some of the other
9 speakers that came before me, in the previous strategy
10 section comments, for Section 3.

11 It seems that there is a huge problem with the
12 quality of installation of a lot of green features in
13 homes. And so, if they're installed incorrectly, or
14 they're operating not optimally, or under-performing in
15 any way, it's really hard, I think, for anyone to come
16 in to value that item accurately, for a home.

17 And so, that is one of the major problems that
18 we're looking at is we know that on its face, seeing
19 that you have dual-paned windows, or increased
20 efficiency HVAC systems, or what have you, on their
21 face, they seem like they could bring great value to a
22 home.

23 But what we really need to understand is were
24 they installed correctly? Are they done -- are they
25 really bringing value to that home? And that hasn't

1 been underscored in this section, the reality of the
2 installation of those systems, and what have you.

3 Also, another major feature that we need to
4 consider in this section is how was that feature
5 financed? If it was financed out-of-pocket, by the
6 homeowner, no problem. If it had any sort of PACE
7 financing around it, that is actually a feature that
8 detracts from the value of a home.

9 For instance, and this is just anecdotally, this
10 has happened to me. I'm in the middle of refinancing my
11 home with Wells Fargo. The first question they asked me
12 over the phone was, do you have a solar system? And I
13 said, no. And they went, whew. Because that, in and of
14 itself, could have had some consequences around my
15 ability to refinance my home.

16 So, I just wanted to highlight that there are
17 the Federal lending -- the government-sponsored
18 enterprises, Fanny and Freddie, FHA, these federal level
19 agencies are the ones that have trouble with PACE
20 financing, and even on bill repayment.

21 And so, earlier, this year, we were in support
22 of Senate Bill 1233, McGuire's Bill, that would have
23 taken water efficiency features, and wrapped the payment
24 of those into the savings that you would have realized
25 from the reduced amount of water that you would have

1 used.

2 And so, basically, it's a pay-as-you-save
3 program, which we felt that we could wholeheartedly
4 support because it didn't put a lien on the property.
5 It didn't encumber the property in a way that we felt
6 would cloud the title.

7 Unfortunately, when we reached out to federal
8 lending agencies, they indicated that even on bill
9 financing through a utility is a problem for them, and
10 that they might not lend to homes with those types of
11 financing features on them. Which was a huge surprise
12 to us because we were in support of the bill. So, then,
13 we had to back step and remove our support, which we're
14 very sad to do. Because we felt like this is a very
15 clever financing program that we had hopes for, in
16 California.

17 So, I think that when we're looking at the
18 valuation of green features, in real estate, we need to
19 look at the -- just to reiterate a couple of things.
20 One, was it done correctly and is it truly bringing
21 value to that home? And, two, how is it financed? And
22 is that, in and of itself, going to create a barrier to
23 financing for that home, or otherwise detract from the
24 marketability of that home.

25 So, we'll bring forward written, more

1 comprehensive comments on that. But thank you.

2 COMMISSIONER MCALLISTER: Great. Just a couple
3 of things. And so, you know, I appreciate your bringing
4 up those issues or potential issues. And I guess,
5 maybe, you ought to ask Martha to highlight some of the
6 strategies that really are meant to help appreciate the
7 effectiveness of, you know, the performance of a
8 building, include the performance of measures that are
9 included in the building. Right? The asset rating
10 approach, that we're trying to modernize, really gets at
11 this issue you're talking about.

12 So, I'm hopeful that we're going to actually
13 create the kinds of -- the kind of environment that can
14 accurately reflect the qualities of the asset that have
15 to do with energy, and then have those on an MLS, in a
16 way that it helps -- or, at least available to the
17 marketplace, in way that it does help, you know,
18 articulate the marketplace, and in a way that makes
19 sense. Right? And so, it helps energy be valued.

20 On the financing stuff, I'll say, I was in the
21 White House, actually, on Tuesday, of last week, talking
22 about PACE. And the FHA, you know, head honchos were
23 there, and we had a really robust conversation. I think
24 there's a lot of progress happening on the Federal
25 level, on this. Certainly, the last couple months of

1 the Obama Administration, they are trying to sort of
2 push this conversation forward.

3 And there are many, I think, there's a huge
4 amount of interest across the states. California's been
5 a leader, you know, in PACE. Our Governor is one of --
6 you know, one of the -- he's been sort of promoting and
7 pushing forward to help PACE mature, since, well, you
8 know, like a decade, now. Really, since the early days
9 of PACE.

10 So, I think there -- so, the other -- where I'm
11 going with this piece is the data aspects of the Action
12 Plan extend to understanding the performance of measures
13 that have been put in place through different programs,
14 including PACE.

15 So, one of the things that I think the Federal
16 government's looking at, and certainly, we're
17 supporting, is getting robust, granular, project-
18 specific data on PACE, to make sure that those -- to
19 understand what the energy performance of those, of
20 properties that have used the PACE mechanism, actually
21 have been. Right?

22 So, keeping an eye on the marketplace. Again,
23 this is something that government, if it has a role, in
24 this instance, it would be consumer protection. And,
25 sort of understanding the impacts from an energy

1 perspective.

2 So, you know, I would encourage -- so, you know,
3 the California Association of Realtors, you know, needs
4 to be involved in these discussions. And I just want to
5 encourage your -- you know, I know you will, but your
6 ongoing participation.

7 MS. GAVRIC: We're more than happy to.

8 COMMISSIONER MCALLISTER: Because I think
9 there's a -- there are very proactive, very, I think,
10 positive approaches to dealing with some of these issues
11 and, really, coming out in a good place on the other
12 end. So, you know, you guys have to be a part of that
13 discussion.

14 MS. GAVRIC: Certainly. And if we can get the
15 financing piece covered, and if we can work with Federal
16 agencies to work through their hesitations -- in fact,
17 we were supportive of PACE, when it was introduced in a
18 bill, in 2009, when it was at the legislative level.

19 So, we were -- we've been supportive of these
20 alternative financing programs, in the past. And the
21 only reason that we've retracted some of that support is
22 we find that our clients cannot find financing with
23 these instruments placed upon homes, that are up for
24 sale.

25 So, if we can just work through that financing

1 piece and then, also, get an accurate representation of
2 what those features really, truly mean to a home, that's
3 really important for us. Thank you.

4 COMMISSIONER MCALLISTER: Yep, totally --
5 totally agreed on that.

6 And, you know, I will say the FHFA has come out
7 with a positive sort of view, now, on PACE. And we're
8 all kind of waiting around for FHA to kind of come
9 around, and that conversation to move forward.

10 But, you know, I think there is an appreciation.
11 And, for the record, I mean, they haven't really
12 blackballed any communities, in terms of buying up the
13 mortgages. But, you know, so I think they're kind of
14 getting comfortable with the fact that the sky hasn't
15 fallen, and there's sort of -- but we all need better
16 data. So, that's a big point.

17 MR. NESBITT: George Nesbitt, HERS Rater. The
18 value of a house is not always the sum of its parts.
19 Especially in a market where prices are going up. The
20 cost of the house does not necessarily reflect the cost
21 of upgrading systems. A lot of studies have shown that
22 most home improvements do not, if you turned around and
23 sold your house, do not return, you know, an equal
24 amount of money in value, to the cost of the
25 improvement.

1 Yet, energy efficient improvements are the one
2 thing that can actually give you back money, over the
3 long term, on your bills, and should bring value to the
4 house.

5 That brings me back to the HERS Rating System.
6 I mean, I know there's been a lot of discussion about
7 appraisers, and energy efficiency, and they are supposed
8 to be able to look at a HERS report and, essentially,
9 take that as part of the value. And our HERS Rating
10 System shows you that what the value of the improvements
11 are, over the life -- well, of a mortgage, typically.
12 And whether it returns more money or not. And just
13 because it doesn't return enough money, doesn't mean it
14 doesn't have value.

15 And that also brings me back to the energy
16 efficient mortgage. What a great product. You can buy
17 a house, fix it up, one mortgage. In theory, I think
18 you can use it even on a new house. Hasn't been used
19 much. Part of it, originally, was our home values were
20 too large. And then, when the market crashed, and I
21 think values -- the allowable limits were raised, it
22 came back in play for a little while, but it's
23 essentially disappeared, despite the fact that we have a
24 real estate disclosure booklet, in California,
25 describing the HERS System

1 Apparently, home energy -- the home energy score
2 can now be used for an energy efficient mortgage, is my
3 understanding. But what it can't do is turn around and
4 give you code compliance.

5 With a HERS Rating, and with the data we
6 collect, we, if you're doing an addition to a house, or
7 a major remodel, and you want to comply with the
8 performance method, especially, we can take that same
9 data and give you energy compliance.

10 So, you want to talk about a cost effective
11 system, I can tell you, I've seen people, who have
12 picked different people, to essentially create the same
13 data on a house. It makes no sense.

14 So, the HERS Rating System is an absolute -- you
15 know, it's the universal solvent. It's the one system
16 that is compatible and is, essentially, recognize by
17 lots of different things.

18 PV systems, whether you own the system matters,
19 versus whether it's a lease. And, you know, the
20 appraiser can't give it any value, if it's a lease.

21 Yet, in the HERS System, we can at least show
22 you the effect on your utility bill. While it may not
23 have value, as an asset, because it's not actually an
24 asset of the house, we can show the value of it to an
25 owner.

1 Part of the energy efficient mortgage, why it
2 hasn't been used, is usually people start the process
3 too late. And realtors are then, also, worried about
4 holding up close.

5 So, if sellers actually had a HERS Rater come
6 in, look at it, give recommendations, some sellers do a
7 lot of work. Unfortunately, you know, there's a lot of
8 work that's done, that is not good, or was maybe not the
9 right decision, as well as the quality.

10 And there, again, the HERS Rater, gosh, we're
11 used for code compliance. So, if we already know the
12 project, maybe we've already tested it, you know, it
13 should be a lot easier.

14 So, yeah, there are issues. But, you know, none
15 of it is really insurmountable.

16 MS. BROOK: Thanks, George. Yeah, so just so
17 that the audience understands, that 2019 target strategy
18 of including asset ratings in real estate listings,
19 really means that we're going to be very, very busy in
20 the next two years, to reestablish the Home Energy
21 Rating System in California regulations. We're going to
22 revisit the regulations. We're doing our very best to
23 reduce the cost of an asset rating, in California, and
24 increase the robust repeatability, and verification of
25 HERS Ratings, to the point of the real estate industry.

1 That it doesn't make a lot of sense to push for metrics
2 in real estate listings, if they're not dependable and
3 robust.

4 And right now, we do know that we have some
5 issues with the Home Energy Rating System, in that way,
6 and that multiple raters can rate the same home, and get
7 different ratings, and that's really not okay, in terms
8 of robust, repeatable, sustainable metrics for home
9 energy performance.

10 So, we're doing our best and will be doing much
11 more, in the coming years, to revisit the regulations,
12 and reestablish the HERS Rating for existing buildings,
13 in ways that Abhilasha mentioned, and consistent with
14 new construction ratings.

15 And so, there's kind of a lot of sub-strategies,
16 kind of, you know, not highlighted on that graphic, that
17 is going to allow that 2019 goal to be met.

18 MS. WADHWA: This is Abhi. I want to add, I had
19 a very interesting conversation with somebody, who used
20 to work at the Energy Commission, and is now pursuing
21 energy policy in Europe.

22 And one of the things we talked about was the
23 plethora of home energy asset ratings that came into the
24 marketplace, in Europe, and started confusing the
25 marketplace so much that, at some point, they'd just

1 given up on it because they feel like people can just go
2 buy whatever rating they want.

3 I think it's pretty similar to what you were
4 saying, George, you know, that people will just hire a
5 different rater. In this case, it's not even a
6 different rater. It's just they have a buffet of rating
7 systems to choose from. And it has completely devalued
8 what rating system was supposed to do for real estate.

9 And the lesson learned for us, in the United
10 States, and California, should be that this is the time
11 to watch out that we don't start creating those kind of
12 confused rating systems.

13 So, that's kind of what Martha is saying. The
14 next years are going to go in making sure we have a
15 consistent, uniform asset rating, which is not only just
16 low cost, or no cost, but also reliable.

17 MR. NESBITT: George Nesbitt, HERS Rater. That
18 has a lot to do with the training. I mean, there may be
19 structural issues to how we're calculating things, and
20 whatnot. But a lot of it just comes down to training,
21 and people, you know, applying the same process. And
22 we can't completely eliminate it.

23 But, unfortunately, what we have done is created
24 confusion. We have a HERS Rating System, which we're
25 required to have by law, yet 2013 Code, we entered the

1 design energy rating, which was really a HERS Rating,
2 but we're not calling it. And 2016 is the same.

3 We've allowed the Energy Upgrade California
4 contractors to do a HERS Rating, but we didn't call it a
5 HERS Rating. It was the same software, the same inputs.
6 And we allowed people, who were not actually trained,
7 and were far more willing to be subjective, and didn't
8 want to do this, did not get trained to do it.

9 CBPCA, California Building Performance
10 Contractors Association, gave up training anyone in the
11 software, essentially, in 2003. Despite a lot of
12 promises about, you know, about calculating savings, and
13 real savings off of real use, and proving savings, and a
14 lot of other things.

15 And so, sadly, we've really undermined it. It's
16 not the HERS Rating System, per se.

17 MS. BROOK: Well, let's talk about this more --

18 MR. NESBITT: A lot of it's implementation.

19 MS. BROOK: Yeah, so, I would say, you know, in
20 2017, look for the announcements for the HERS
21 discussions, and we really want your input.

22 But we're going to keep going, now, if that's
23 okay? So, Goal 5. No, really -- okay, Goal 5 is --

24 COMMISSIONER MCALLISTER: Let's make sure, just
25 at the end, in the public comment, let's just make sure

1 that we really give the phone a workout and just make
2 sure anybody who wants to comment, can do so.

3 MS. BROOK: Sure, sure.

4 Goal 5 is Efficiency Financing. And we've been
5 touching on this off and on all day. So, I would say,
6 overall, the update is -- really doesn't change anything
7 fundamental in the strategy section. We have all the
8 same strategies. We updated -- we trued up some of the
9 timeline, and expected due dates for the strategies.

10 But the update, itself, really talks about the
11 status of the California Hub For Energy Efficiency
12 Financing, CHEEF, which is administered by the
13 California Alternative Energy and Transportation
14 Financing Authority, CAEATFA. And they are in the
15 process of developing a finance payment and project
16 performance database. And this, to Andrew's, and
17 others', points about data, and metrics, and
18 understanding if we're getting the value that we expect,
19 and the performance that we expect.

20 This will be huge in terms of understanding the
21 investment strategies, and whether we're getting what we
22 expect we did, by collecting the right data to support
23 those types of analyses.

24 The Investor Owned Utilities are financing
25 CAEATFA to do some piloting for different finance

1 products, and also included in the Tracking and
2 Performance Database.

3 As of July, 2016, there's a single-family pilot,
4 the Residential Energy Efficiency Loan Assistant
5 Program, REEL, that's been launched. It hasn't had a
6 lot of uptake, yet, but we're anticipating that to grow
7 in the coming years.

8 And we talk a little bit about the PACE progress
9 because it's been pretty huge, in California. We
10 expect, you know, a \$2 billion type of financing
11 efforts, to date, in the single-family residential
12 market.

13 So, again, understanding the performance of PACE
14 projects and programs is really important. It will be
15 very interesting, as well, to see if any of the PACE
16 providers actually participate in PG&E's Pay-for-
17 Performance Pilot, to see if they're willing to maybe
18 invest more heavily in energy efficiency, and use a
19 meter-based savings approach to understand savings
20 performance.

21 We talk a little bit about the barriers to
22 commercial efficiency investments. And some of the
23 things utilities are doing, like the Alternative On-Bill
24 Financing Program, that PG&E is launching. That doesn't
25 pay a traditional incentive, but definitely streamlines

1 participation and uses, meter-based savings approach in
2 that on-bill financing program.

3 So, we're looking forward to understanding the
4 value and the example that that pilot will serve.

5 We talked, some, about more effective and full
6 participation of low-income and disadvantaged
7 communities, in financing programs. And one of the
8 things we didn't mention in the data section, that's
9 relevant here, is that the Community Services
10 Department, in California, that runs our Weatherization
11 Programs, our Federal Weatherization Programs, and some
12 of our Cap and Trade Efficiency Programs, is
13 collaborating with the Public Utility Commission to
14 build a central database, so that all low-income
15 financing, and incentive programs will be kind of under
16 one umbrella, in terms of data. And so, that we can
17 collect, monitor, analyze and report on low-income
18 financing and low-income efficiency programs going
19 forward.

20 That is all I wanted to highlight in the
21 financing section, except that we do have a -- kind of
22 an introduction in this section, that's a little bit
23 gloomy. This talks about the fact that in order to meet
24 our goals, we need to mobilize, you know, orders of
25 magnitude more of financing mechanisms in private

1 capital, than we have been able to do, to date, in the
2 State. And that, we really need creative options in
3 this area. And we're hoping that data and performance-
4 based documentation, you know, risk assessments will
5 help that private capital invest, because they'll see
6 that efficiency is real. It's not just something we put
7 on paper, but there is a way to measure it, and to
8 monitor it over time, and there's documented processes
9 to confirm savings. So, we're hoping that that will
10 help private investments in the future.

11 But we still need a lot more. And that's all I
12 have. If anybody has any comments or suggestions for
13 us, now is the time, on financing.

14 I know, everybody's wondering who's financing
15 lunch. That's what I'm -- I know, my stomach's thinking
16 that.

17 Good. Anybody on the phone? And now is the
18 time, if you have any comments about anything, including
19 if you had some struggles with the phone. We're going
20 to open the lines and give you another chance to tell us
21 what you're doing. And, hopefully, it will be related
22 to what we're talking about.

23 And once again, if you're listening, only,
24 please mute your lines. The phones are going to be
25 open.

1 COMMISSIONER MCALLISTER: The lines are open.

2 Anybody want to comment?

3 MS. HARRIS HICKS: Yes, I would like to, but I'm
4 not connected.

5 COMMISSIONER MCALLISTER: You are. If you want
6 to comment on the AB 758 Action Plan Update, you are on.

7 MS. HARRIS HICKS: Oh, in other words, you can
8 hear me, there in the room?

9 COMMISSIONER MCALLISTER: Yes. Just state your
10 name and feel free to comment.

11 MS. HARRIS HICKS: Okay. I'm Lynne Harris
12 Hicks. And I'm advocate in the issues that have been
13 done, by many organizations, in a collaborative way.
14 And we're making it even more collaborative, now, with
15 the (indiscernible) -- League of Women Voters, and all
16 those kinds of groups.

17 And I am faced with the protest, actually, of
18 people, on several of these factors that you've been
19 talking about there. And I want to warn you, that if
20 you do not know already, and I would like the people who
21 are listening to this to know it, that you must be very
22 careful in doing any sort of single umbrella, you call
23 it, efforts, or regulations, or the investigations with
24 the California Public Utilities Commission. Because it
25 has so completely been captured by the energy owners,

1 International Edison, International Semptra.

2 And this is a very deteriorating to our whole
3 system, in which we were attempting to move from the
4 fossil and nuclear to the clean, safe, and free source
5 renewables. Because we find that this is not just in
6 the California Public Utilities Commission, but most of
7 our -- I shouldn't say most, I don't know if it's most.
8 But in many of our protective agencies, there is the
9 effort to cover up, or to delay, or to whatever they
10 have to do to protect the energy people.

11 And so, this is very important right now because
12 we can't seem to get it out in the newspapers. And so,
13 this is -- I would hope that you would give some kind of
14 a hearing in Southern California, and not way up in
15 Sacramento, because of the effects of this is so big in
16 the southern most reaches, in the Capistrano Bay Area,
17 we call it, where San Onofre is.

18 And the closing of San Onofre is just really --
19 it just closed, now, and there's very much cost, and
20 that's what we want to make sure that -- I'm so glad to
21 hear the good recommendations that have come in through
22 this session that you're doing. Because it's just what
23 we need. We need to have specifics in the regulations,
24 and we have to have some kind of investigations of them.

25 And the one that is most visible, now, is the

1 CNG -- they call it clean natural gas. And it's handled
2 in the California Energy Commission reports. It's
3 handled in the Renewables section, as other efficiency
4 measures. Other efficiency measures.

5 And we now know that it's neither safe, nor
6 efficient, because it has the possibility of such
7 terrible tragedies as have happened in Porter Ranch.

8 COMMISSIONER MCALLISTER: Thank you.

9 MS. HARRIS HICKS: Okay.

10 COMMISSIONER MCALLISTER: Yeah, I wanted to
11 acknowledge your comments, and also thank you for your
12 written comments that you submitted. And then, also,
13 invite you to submit further comments, if you have them,
14 to --

15 MS. HARRIS HICKS: Oh, that was just a little,
16 off-the-cuff comment. But I will try to get some of our
17 leaders to do that, now. Because I realize how
18 important it is for you. Okay, thank you.

19 COMMISSIONER MCALLISTER: Thank you for your
20 comments.

21 MR. GOLDEN: This is Matt Golden. Can you hear
22 me?

23 COMMISSIONER MCALLISTER: Hi, Matt. Go ahead.

24 MR. GOLDEN: Great. Thank you, in general, for
25 this presentation today. I'm going to just cover one

1 kind of specific point, but it's definitely related to a
2 lot of what's been talked about today, and also just
3 looking at this final slide.

4 You know, I just want to make the point that
5 there's been a lot of focus -- I think when we talk
6 about energy efficiency financing, we're kind of
7 confusing two issues, regularly, that are both equally
8 important but, really, should be thought of somewhat
9 separately.

10 So, whether it's PACE, or OBI, through CAEATFA,
11 or a loan, or a lease, you know, consumer financing is
12 definitely a requirement for energy efficiency to scale.
13 And I think we're seeing a lot of really exciting
14 advances in that respect.

15 But I think we should be thinking about, and
16 when you look at, like, lower down the slide, where it
17 talks about preferred resource procurement, we're really
18 talking about a different type of financing of energy
19 efficiency, that really shouldn't be confused with
20 consumer financing.

21 So, right now, customers are, in financing
22 energy efficiency, they're saving on their bills,
23 they're receiving many benefits. But a large amount of
24 the benefit that's actually being generated is being
25 accrued to the utility, you know, as a grid benefit, and

1 also a carbon benefit.

2 And so, I think it's really worth kind of
3 separating and thinking differently about consumer
4 finance, which again is either based on the asset, the
5 credit rating of the borrower, or the assessment, which
6 is paying for their benefit. The bill savings, you
7 know, the more comfortable home that they're living in.

8 And, really, separately thinking about the
9 benefit that's accruing to the utility, and to the
10 public sector, in the form of a new grid resource that
11 can help us, you know, balance solar generation, for
12 example, and also for the carbon reduction.

13 And, really, that requires a different type of
14 financing, which is ultimately project finance, and is
15 really kind of a wholesale signal.

16 And so, I just would encourage that, you know,
17 we can have multiple forms of consumer financing, that's
18 helping kind of customers pay for their part of the
19 benefit that's being accrued, but there's real -- real
20 energy efficiency financing. When I say, "real", you
21 know, really underwriting energy efficiency as the asset
22 is really this transaction between aggregators, you
23 know, folks that are putting together portfolios of
24 projects, that are driving measurable savings that the
25 utility can start to procure, as a true, grid resource.

1 And that's really a different type of financing,
2 altogether, and creates a market-based platform for
3 these other, consumer business models, essentially.

4 So, I just wanted to kind of throw that out
5 there that I think both are necessary, and we're seeing
6 great advances in both, but they, really, shouldn't be
7 confused, ultimately, as we think about policies and
8 what needs to be rolled out in the marketplace.

9 COMMISSIONER MCALLISTER: Thanks. Good points,
10 Matt.

11 MS. BROOK: Yeah, thanks, Matt. We'll try to
12 accomplish that in the next version of the plan. We
13 appreciate that clarification.

14 Anybody else on the phone? Going once. Going
15 twice.

16 Okay, so, we're going to wrap up, now. This is
17 Martha Brook. Thank you for spending your morning with
18 us. And, let's see, I'm going to say something about
19 when your written comments are due. Where is that?

20 November 1st, Tuesday, 5:00 p.m., we'll be
21 accepting comments into the docket, that you should
22 already know about, Docket 16-EBP-01. And we hope that
23 we can respond to those in a way that makes our final
24 plan update better. Thanks.

25 MS. WADHWA: Just to add to that, this is Abhi.

1 We plan to adopt the final update in the December
2 Business Meeting. So, this time around -- we usually
3 accept slackers But this time around, if you can please
4 be prompt, and try to submit as soon as possible, that
5 really helps staff. We are on a very short deadline
6 staff. It would really help staff to start addressing
7 your comments, quickly. So, November 1st, it is.

8 COMMISSIONER MCALLISTER: Great. Well, thanks a
9 lot. I'm going to just wrap things up. I really
10 appreciate everybody coming, especially the stalwarts,
11 who are still here.

12 But this has been a great discussion and I'm
13 really glad we're moving forward.

14 I want to, you know, highlight the urgency here,
15 again, to get the update done, as we are obligated to,
16 actually, by the end of the year.

17 And this is, again, you know, as in everything,
18 AB 758, it's sort of each step is another step on a long
19 journey, actually, that's going to get us -- get us to
20 2030, and 2050, and really provide a lot of value to the
21 State and help us reach our long-term goals.

22 And, frankly, improve people's lives across the
23 State, in ways that have to do with energy, in other
24 ways that don't even have anything to do with energy,
25 just quality of the built environment. Whether it's our

1 schools, our public buildings, our homes, our
2 businesses, it's all going to be, I think, much
3 improved. And, hopefully, we'll find ways to do it in
4 each of those sectors and beyond.

5 So, anyway, thanks for coming here. And let's
6 keep that long-term perspective, but still bring your
7 creativity to the table in comments.

8 That's very much. We're adjourned.

9 (Thereupon, the Workshop was adjourned at
10 12:59 p.m.)

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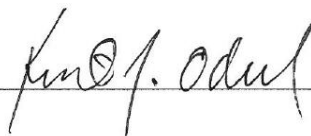
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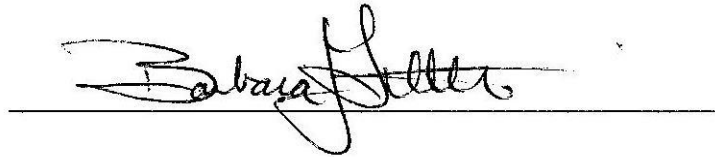
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