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CALIFORNIA ENERGY COMMISSION

In the matter of:

Joint Workshop) Docket No. 20-DECARB-01
_____)

CALIFORNIA ENERGY COMMISSIONER AND
CALIFORNIA PUBLIC UTILITIES COMMISSION
JOINT AGENCY WORKSHOP ON BUILDING INITIATIVE
FOR LOW-EMISSION DEVELOPMENT (BUILD)
IMPLEMENTATION PLAN

REMOTE VIA ZOOM

MONDAY, JUNE 15, 2020

9:00 A.M.

Reported by:

Martha Nelson

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AGENDA

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1 workshop, as well as the first workshop using
2 Zoom. We've got multiple Staff on the line to
3 help address any technical issues that may arise,
4 but please bear with us if there are any hiccups.

5 This meeting is being recorded, as well
6 as transcribed, by a court reporter.

7 Everyone will be muted during the
8 presentation but, after the conclusion of the
9 presentation, we will have an opportunity for
10 clarifying questions and to take public comments.

11 To ask a question or provide a public
12 comment, please use the raise-hand feature in
13 your Zoom application to be called on to speak.
14 When you speak, please provide your name and
15 affiliation and the spelling of your name.

16 If you called in by phone, you will need
17 to dial star nine to raise your hand and star six
18 to un-mute yourself. And please spell your name
19 for the court reporter.

20 Please limit your comments to three
21 minutes to allow all parties to participate.

22 There's also a Q&A window in the Zoom
23 application with which you can type your
24 questions. If you want to provide public comment
25 but are unable to raise your hand in the Zoom

1 application or by phone, then during the public
2 comment portion of the workshop, you may type
3 your comment into the Q&A window and we will read
4 it aloud. We'll call on folks with raised hands
5 first, then turn to parties on the phone, and
6 then read aloud questions from the Q&A window.
7 We'll go over these instructions again during the
8 time for questions and comments.

9 Please remember to stay muted until
10 you've been called on to speak.

11 We also have a chat function available
12 for logistics of tech questions, which is a
13 separate function from the Q&A window. Please do
14 not use the chat window for Q&A about the content
15 presented at the workshop or to make public
16 comments.

17 Written comments must be submitted by
18 May -- by Monday, June 29th. We great appreciate
19 comments submitted early and encourage you to
20 submit comments through the e-commenting system,
21 particularly during this time where the majority
22 of CEC Staff are teleworking.

23 Next slide please.

24 SB 1477 outlines several facets of
25 program guidelines for the Energy Commission to

1 develop, including a list of eligible
2 technologies, a process for evaluating new
3 technologies, criteria for scoring and selecting
4 projects, and a process and set of metrics by
5 which to evaluate and track the program's
6 results.

7 We've designed the format of this
8 workshop to facilitate those responsibilities.
9 We'll discuss incentive structure and the design
10 process, equipment eligibility and evaluating new
11 technologies, the methodology for calculating GHG
12 emissions reductions and bill savings, technical
13 assistance and outreach, and program evaluation.
14 There will be time for comment during each
15 section of the public workshop. We've also set
16 aside additional time at the conclusion of the
17 last presentation for additional public comments.

18 At this time, I'd like to welcome Chair
19 Hochschild, Commissioner McAllister, Commissioner
20 Randolph, and Commissioner Rechtschaffen, and
21 invite them to provide opening remarks, if they
22 wish.

23 COMMISSIONER MCALLISTER: Great.
24 Everybody, can you hear me? This is Andrew
25 McAllister.

1 CHAIR HOCHSCHILD: Yeah, we can hear you.

2 COMMISSIONER MCALLISTER: Great. Well,
3 welcome everybody. This has got really robust
4 participation, which is great. My name is Andrew
5 McAllister, Lead Commissioner on Energy
6 Efficiency, and also at the Energy Commission,
7 and also primary responsibility for this, for the
8 Energy Commission's piece of this program as
9 program administrator.

10 So I want to thank my colleagues at the
11 Energy Commission, Chair Hochschild, and
12 Commissioners Randolph and Rechtschaffen, for
13 their sort of leadership and support of this
14 program. It's really going to be, it already is
15 and is going to, I think, be an example of
16 collaboration across the agencies in our quest
17 for zero carbon, zero-carbon buildings and a
18 zero-carbon economy. And I just wanted to make a
19 few points highlighting that importance.

20 You know, I think this is actually the
21 start of something big. It's not the biggest
22 program that we've ever run in the state,
23 relatively modest to start in terms of the
24 resources that it's dedicating to decarbonization
25 of our buildings and, in particular, our heating

1 loads, but it is, I think, a structure that we
2 will find ways to build on going forward for the
3 coming years and decades.

4 Staff at both Commissions are working
5 together really, really well on this. And I
6 think that collaboration will be key to designing
7 and implementing a successful program, as well,
8 the stakeholder engagement today and going
9 forward.

10 We had a pretty compressed timeline on
11 this in terms of, you know, standing up the
12 program and starting -- and opening doors for
13 business and sort of making sure to follow a
14 process that ends up with a good quality
15 administrative structure for the program, one
16 that is transparent and flexible.

17 So part of, I think, the key
18 conversations today will be process. You know,
19 what does the marketplace need? What things are
20 we going to learn? How do we adapt and adjust to
21 those learnings along the way as the market
22 evolves? You know, the technology of this
23 program, I think, is really important.

24 But the main, I think, significance of
25 this program is its equity focus. Multifamily

1 buildings, in particular, low-income is really, I
2 think, one of the hardest nuts to crack and
3 probably the most essential one to getting where
4 we need to go.

5 You know, we have -- roughly a third of
6 our population is low-income. It doesn't have a
7 lot of disposable income and can't really be
8 expected to pay for a lot of these upgrades
9 themselves, so we need to put in place structures
10 that help the marketplace get where it needs to
11 go, you know, in a collaborative and collective
12 way. So this program is going to be key to
13 driving that section of the marketplace and then
14 broadening down the road as the program -- as the
15 opportunities expand and, particular or
16 hopefully, as additional funding comes into play.

17 So with that, I just wanted to highlight
18 a few of the ways that I see this as important.
19 It's really critical for the state. It's a
20 really important program. And I want to thank all
21 the stakeholders who have gotten us this far.
22 Certainly, the original legislation and
23 collaboration with the PUC in terms of
24 structuring how to go forward with both the BUILD
25 Program and the TECH Program.

1 So with that, I'll pass the baton to

2 Chair Hochschild --

3 CHAIR HOCHSCHILD: I'm happy to say --

4 COMMISSIONER MCALLISTER: -- or maybe our
5 colleagues --

6 CHAIR HOCHSCHILD: -- a few words.

7 COMMISSIONER MCALLISTER: -- at the PUC?
8 I'm not sure.

9 CHAIR HOCHSCHILD: Let's go to
10 Commissioner Randolph or --

11 COMMISSIONER MCALLISTER: Yeah. There we
12 go.

13 CHAIR HOCHSCHILD: -- Commissioner
14 Rechtschaffen first.

15 COMMISSIONER RANDOLPH: Good morning
16 everyone. This is Commissioner Randolph from the
17 PUC. Thanks so much to CEC Staff and PUC Staff
18 for putting together this workshop.

19 I can't really add much more to what
20 Commissioner McAllister said because I think he
21 hit all the important points. I mean, I think
22 this program presents a huge opportunity to try
23 to understand how we can decarbonize the building
24 sector and ensure that low-income residents have
25 the opportunity to participate in these programs

1 and see what the residents are interested in,
2 what the market is interested in. And I'm pretty
3 excited about the collaboration between the CEC
4 Staff and the PUC Staff and excited to get this
5 program off the ground. So looking forward to
6 our discussion today.

7 Thank you.

8 CHAIR HOCHSCHILD: Commissioner
9 Rechtschaffen?

10 Is he on? Okay. If not, then --

11 COMMISSIONER MCALLISTER: He shows as
12 being on.

13 CHAIR HOCHSCHILD: Are you there, Cliff?
14 Okay. If not, I'll just make a few --

15 COMMISSIONER RECHTSCHAFFEN: Can you hear
16 me?

17 CHAIR HOCHSCHILD: Oh, yeah. Go ahead.
18 Go ahead.

19 COMMISSIONER MCALLISTER: There you are.

20 CHAIR HOCHSCHILD: Yeah.

21 COMMISSIONER RECHTSCHAFFEN: You missed
22 what I just said. It was unbelievable. I
23 apologize that I was on mute but I'll repeat my
24 praise for my fellow Commissioners. That was the
25 main thing.

1 Good morning. I'm delighted to be here.
2 Along with Commissioner Randolph, I'm one of the
3 leads at the PUC on the building electrification
4 and decarbonization proceedings.

5 I also agree with Commissioner
6 McAllister's opening remarks. This is something
7 very, very big. It's one of our major clean
8 energy initiatives. Equity has to be the focus,
9 as Commissioner McAllister said. That focus is
10 even more imperative than every given the
11 economic dislocation and the economic disparities
12 laid bare by COVID.

13 I also very much appreciate the strong
14 collaboration of the CEC Staff and the CEC
15 Commissioners. And I look forward to a full day
16 today of discussion.

17 Thank you.

18 CHAIR HOCHSCHILD: Great. Thank you,
19 Commissioner Rechtschaffen and Commissioner
20 Randolph, for your terrific leadership, and
21 Commissioner McAllister for your ongoing work on
22 this.

23 You know, I just want to say, it's been a
24 heartbreaking few weeks, heartbreaking few months
25 for our country. I can't remember a time when

1 there was this much bad news compressed into such
2 a short period. But I also feel some very, very
3 good things can be born out of this moment. And
4 California, in particular, has an opportunity to
5 lead and create things that I think are going to
6 change the future in a way that will have lasting
7 benefits.

8 And while it's true that we produce more
9 emissions from burning natural gas in our
10 buildings in California than from our entire
11 fleet of gas power plants, and that has, you
12 know, climate change impacts, I think it's a
13 mistake to view this only through the lens of
14 climate change and the benefits we can get on
15 that side. I think this is fundamentally, also,
16 a health issue in homes. Indoor air pollution,
17 particular in the COVID-19 crisis we're in,
18 matters a lot, and particular for low-income
19 homes.

20 What we've found in the research that's
21 happened so far, it's very clear that, often,
22 low-income households have very poor ventilation
23 and the health impacts are greater from indoor
24 air pollution. And so this is really about
25 making a positive contribution to make that

1 problem better and I think we can have a big
2 impact with this program, all of us together.

3 So, again, thanks to our colleagues to
4 the CPUC and to the staff and Commissioner
5 McAllister, the PUC. I look forward to the
6 discussion.

7 MR. SCAVO: Thank you so much, Chair
8 Hochschild and our Commissioners in attendance.
9 Okay.

10 The purpose of this workshop is to
11 discuss framing concepts and requirements for
12 BUILD implementation, and to solicit stakeholder
13 feedback to assist our work in developing the
14 Implementation Plan. We're keen to hear
15 technical insights from low-income housing
16 developers and advocates as those perspectives
17 will help ensure the program we create best meets
18 the objectives of SB 1477.

19 The legislature authorized BUILD in 2018
20 through Senate Bill 1477. Among other things, SB
21 1477 establishes the authority and funding to
22 develop the BUILD Pilot Program. SB 1477 also
23 authorized the TECH Pilot, which is a program
24 being developed by CPUC that will target upstream
25 market transformation of residential space and

1 water heaters. This workshop focuses on BUILD
2 but we'll be happy to direct inquiries about TECH
3 to the appropriate staff at CPUC after the
4 workshop.

5 The legislature's stated purpose of BUILD
6 is to emulate the success of the new Solar Homes
7 Partnership by providing incentives for new
8 residential buildings that result in bill savings
9 and significant reductions of GHG emissions with
10 a special focus on advancing the market for clean
11 heating technologies.

12 SB 1477 tasks the CPUC, in consultation
13 with the Energy Commission, to develop the BUILD
14 Program and allocated \$200 million of the
15 Greenhouse Gas Reduction Fund to the BUILD and
16 TECH Pilots, requiring that \$60 million of that
17 allocation be spent on new low-income housing
18 developments.

19 Through Decision 20-03-027, the CPUC laid
20 the groundwork for BUILD development. Among
21 other things, that decision identifies the CEC as
22 the BUILD administrator and assigned program
23 development to the CEC with CPUC oversight. In
24 the decision, CPUC allocated \$80 million to
25 BUILD, of which at least \$60 million must be used

1 for new low-income residential housing.

2 The CPUC decision enumerates additional
3 program requirements and guidance which we'll
4 address in each relevant section of this
5 workshop.

6 I'll lay out some of our key milestones
7 for development of BUILD. We'll consider public
8 feedback from this workshop as we continue to
9 draft the Implementation Plan, which we're
10 required to submit to the CPUC on July 24th.
11 When we submit the Implementation Plan, we'll
12 open a two-week public comment period. Based on
13 feedback we receive during that period, we'll
14 issue an addendum to the Implementation Plan in
15 August 2020.

16 Pending approval of budgetary authority,
17 we will issue a request for proposal for a third-
18 party technical assistance provider in the third
19 quarter of 2020.

20 We will publish draft program guidelines
21 in the fourth quarter of 2020 and final
22 guidelines in the first quarter of 2021.

23 We plan to begin accepting and processing
24 applications under the BUILD Program before July
25 1st of 2021.

1 And here I'll pass it over to Geoff
2 Dodson to speak on the application process and
3 the incentive structure.

4 MR. DODSON: All right. Thank you,
5 Jordan, for providing that introduction to BUILD.

6 I just want to make sure I'm un-muted.

7 All right, everyone, my name is Geoff
8 Dodson and I am a staff member with the BUILD
9 Team. I will be overviewing a couple important
10 topics, that's the application process for BUILD,
11 as well as the framework for an incentive
12 structure.

13 I'm going to first cover the application
14 process in the next few slides and then I'll move
15 on to the incentive structure. And then at that
16 point I'll go ahead and allow some time for
17 comments on both topics.

18 There will also be time towards the end
19 of the workshop for general comments, if you also
20 realize that you have additional feedback on
21 either of these two topics, so there are multiple
22 opportunities to speak.

23 So the application process is an
24 important feature in both the effectiveness of
25 the program goals, as well as the integrity of

1 the funding. As far as the logistics of applying
2 goes, we do anticipate offering a web portal for
3 electronic submittals. In our new post-COVID
4 world, it may finally be possible to apply
5 completely electronically. We'll see.

6 A tried and true approach to the
7 application process would be a two-step process,
8 much like the New Solar Homes Partnerships, or
9 NSHP, which is in its final stages and
10 incentivizes solar PV on newly constructed
11 residential homes. The program is largely
12 successful and is specifically mentioned in SB
13 1477 statute. The basic premise involves
14 applying for and reserving funds prior to
15 construction. Funding would be set aside for a
16 given project. Following buildout, the applicant
17 would submit verification documentation and be
18 paid out following project completion.

19 In this two-step process scenario the
20 reservation process would ideally occur during
21 the building-design phase in order to ensure that
22 program requirements are incorporated into the
23 plan. The BUILD Program is required to provide a
24 technical function of serving interested
25 applicants, especially for low-income housing

1 developers. It is our intent that interested
2 applicants work closely with the technical
3 assistance provider in order to help guide the
4 developer through the process and limit
5 additional burden on developers who already have
6 plenty to worry about.

7 If a reservation application is approved
8 the incentive funding will be set aside
9 specifically for a given project for a reasonable
10 time period that allows for completion of
11 construction. We are interested in hearing from
12 developers on what the normal time range is from
13 building design to building completion.

14 Following project buildout, the applicant
15 would then submit their payment claim
16 application. This primarily allows program staff
17 to verify project requirements that are met.
18 And, at this point, payment would be issued. If
19 changes to the building design occur or installed
20 appliances change significantly the incentive
21 could still be adjusted based on new modeling, as
22 long as some of the requirements are still met.

23 So while this two-step process
24 application that I overviewed may be feasible to
25 market rate housing, Staff are aware that this

1 may be challenging for low-income building
2 developers. Our understanding is that many low-
3 income building developers operate on paper-think
4 margins and would struggle to implement these
5 above-code measures without funding readily
6 available.

7 We would like to hear from low-income
8 building developers about their thoughts on this
9 two-step application process and what
10 considerations are important for Staff to be
11 aware of. We are open to exploring alternative
12 options if the two-step process poses a
13 significant barrier for low-income residential
14 development.

15 At this time, I'll go ahead and move on
16 to our outline of the incentive structure. And
17 then there will be time at the end for comments
18 on both of these topics.

19 Moving on to the incentive structure for
20 BUILD. Before presenting a potential approach to
21 the incentive structure, it is important to note
22 that this is an area in which the boundary is
23 somewhat narrow based on SB 1477 statute and
24 regulatory language.

25 A couple key items to note.

1 We must use a whole building approach,
2 rather than providing direct rebates for
3 individual pieces of equipment. Practically
4 speaking, this will likely manifest itself
5 through building performance modeling software.
6 The results of the whole building model will
7 correspond to an incentive total sum.

8 The source of the funds require that
9 incentives be tied to expected avoided greenhouse
10 gas, or GHG, emissions. Therefore, in addition
11 to requiring all-electric features, measures that
12 contribute to better performance in GHG reduction
13 will lead to better incentive totals.

14 As noted, a big focus of the program is
15 on low-income building developers. And if the
16 program eventually expands applicant eligibility,
17 the incentive structure will continue to
18 prioritize low-income residential housing.

19 And, lastly, we are not the only
20 downstream customer incentive program related to
21 building electrification efforts. As such, we
22 must account for applicants that participate in
23 other programs.

24 In addition to our statute and regulatory
25 boundaries, there are some overarching principles

1 and goals that we hope to convey in our program
2 design. For starters, our incentives will only
3 apply to features that go beyond the prescriptive
4 standard for mixed-fuel residential buildings in
5 the California Building Energy Efficiency
6 Standards.

7 Projects in areas with REACH codes passed
8 by local governments that surpass the
9 requirements of the California Energy Code or any
10 other state requirement may still receive BUILD
11 Program incentives. So, therefore, this
12 principle may only apply to statewide
13 prescriptive standards for mixed-fuel residential
14 buildings.

15 While this is merely a pilot program, an
16 eventual goal of California is to fully
17 decarbonize buildings. Therefore, this program
18 is intended to push the market to be self-
19 sustaining so that incentives are no longer
20 needed in the long term.

21 The whole building approach recognizes
22 that we need to emphasize holistic design
23 measures that reduce GHG emissions. Building
24 electrification cannot simply be an energy
25 efficiency measure or a renewable energy

1 technology. Ultimately, there are many measures
2 that complement each other to produce a holistic
3 approach towards better results in GHG emission
4 reductions. An analogy that I like to use is
5 that we can't simply incentivize an all-electric
6 Hummer.

7 Lastly, a goal of ours is to communicate
8 the range of incentives that can be achieved for
9 various performance measures. We intend to show
10 examples of generic designs and their potential
11 incentive so that interested applicants can
12 assess the approximate incentive amount before
13 choosing to apply.

14 On the note of total incentive amount, an
15 area that we would like feedback on is the total
16 funding threshold that could make or break a
17 decision to even bother applying for the program.
18 For example, you might be a developer with plans
19 to construct a 50-unit multifamily low-income
20 apartment building in the Central Valley. What
21 minimum incentive total would be necessary to
22 consider applying? Ultimately, we aim to find
23 the balance between pushing the market without
24 overpaying using ratepayer funding.

25 So to summarize, there are four key

1 elements that define a likely approach to the
2 incentive structure.

3 First, we intend to set some minimum
4 standards necessary to participate. This
5 includes no gas hookup to new construction or
6 capped gas lines for residential conversions and
7 retrofits.

8 It also includes minimum Building Code
9 measures, such as minimum appliance standards for
10 water heating and HVAC systems.

11 From there, incentives are based on model
12 building performance, which may vary, based on
13 climate zone. Items that are not modeled easily
14 in CBECC but still contribute to whole building
15 GHG performance may receive a separate kicker
16 incentive to boost adoption. I'll touch on this
17 in the next slide.

18 And, lastly, we must factor in incentives
19 received from other similar programs. This is a
20 challenging requirement with no easy solution and
21 I will touch on this more in a few minutes.

22 One of the key elements of the incentive
23 structure is what we call a kicker incentive. So
24 what, exactly, do we mean by this?

25 In the incentive structure approach that

1 I'm highlighting, the core of the BUILD incentive
2 comes from the results of modeling software that
3 uses the building design as the input, and the
4 output includes expected GHG emissions. Since
5 our funding must tie to avoided GHG emissions,
6 the software can provide a readily available tool
7 to convert to an incentive, which most builders
8 already must complete, making it a seamless
9 application process. However, at the moment, not
10 all software inputs drill down deep enough to
11 cover all contributing factors.

12 For example, CBECC modeling software only
13 models for gas or electric cooktop stoves.
14 However, since induction cooktop stoves perform
15 better than standard electric cooktops, we need a
16 way to encourage adoption of this feature. To
17 solve this, one approach is to offer an
18 additional kicker incentive to encourage the
19 installation of induction stoves.
20 Hypothetically, this might be a simple flat rate,
21 such as \$100 per installed cooktop on top of the
22 modeled incentive. The same logic could be
23 applied to other building design features and
24 Erica will cover this a little bit more later on.
25 For now, we just wanted to present the idea.

1 So as I mentioned, we need to account for
2 funding received from other programs. We want to
3 encourage applicants to leverage other sources of
4 funding and accommodate those that do. The main
5 challenge involved is finding a simple solution
6 that ensures that there is no double dipping of
7 funds but still minimizes the burden on the
8 applicant.

9 There are a few reasons for this
10 challenge. There are a variety of programs and
11 they do not all share identical goals and
12 requirements. This can sometimes make it
13 challenging as funding sources may not always be
14 an apples-to-apples comparison. Additionally,
15 without a simple solution to account for this, it
16 could pose administrative challenges if BUILD
17 staff needs to constantly track existing and
18 emerging programs, as well as changes to the
19 requirements within those programs.

20 To highlight the difficulty in accounting
21 for funding received from similar programs, this
22 slide shows examples of some potential programs
23 that may come online and that may overlap in some
24 areas with BUILD. The potential variety is large
25 and some programs may or may not be able to

1 accommodate incentive layering.

2 Without getting into the weeds too much,
3 the point of showing this is to highlight that
4 there are many programs contributing towards
5 building electrification end goals but each
6 individual program may have different underlying
7 purposes, program rules, market targets, and
8 restrictions on incentive layering.

9 If a BUILD applicant is also applying to
10 one of more of these programs, it can quickly
11 become challenging to assess the degree to which
12 two pots of funding overlap and, therefore, must
13 be accounted for to avoid double dipping.

14 In situations where there is a direct
15 overlap with funding from separate programs, here
16 is one possible approach that could be used to
17 factor in funding received from the same
18 applicant from multiple programs. The numbers
19 shown here are completely fictional, just for
20 demonstration purposes. In this approach,
21 funding received from other programs is simply
22 shaved off the top of a BUILD incentive resulting
23 in a net-neutral incentive total. This approach
24 is by no means fully baked and it is simply an
25 example of looking at how this issue could be

1 addressed.

2 The main benefits to that approach that I
3 just highlighted are that it ultimately meets our
4 requirement of accounting for funding from other
5 programs and it is easily understandable for
6 applicants.

7 There are some significant drawbacks,
8 though, when you dig below the surface. For one,
9 it is unlikely that funding for multiple programs
10 will overlap so neatly that it results in a
11 simple calculation.

12 Secondly, it would likely have to be
13 self-reported by the applicant and could be
14 administratively burdensome to verify funding
15 that isn't reported.

16 Additionally, there could be challenges
17 in timing since an applicant may not apply to
18 multiple programs at the same time.

19 Ultimately, there are a lot of flaws but,
20 fortunately, there is an upcoming workshop
21 focused specifically on this issue.

22 This is a difficult challenge. And while
23 we wanted to at least mention this as part of our
24 thinking in the program, we will defer everyone
25 to a CPUC workshop on June 30th, so in about two

1 weeks, specifically to discuss and address this
2 issue since it applies to all programs. So for
3 those interested in participating in this
4 discussion, please, mark your calendars and
5 engage to go deeper into this issue.

6 So at this time, before we move on to the
7 next topic by Erica, this is a good time to pause
8 and take some public comments on the two topics
9 that I just presented. So I'm going to go ahead
10 and defer to Jordan to kind of moderate. And as
11 we mentioned earlier, we'll first go to comments
12 through the raise-hand function.

13 MR. SCAVO: Thank you, Geoff.

14 I see a raised hand.

15 MS. CHAC: Yeah. Hey, this is Erica.

16 There is one raised hand from Deanna Haines,
17 D-E-A-N-N-A.

18 Deanna, you should be able to un-mute
19 yourself now.

20 MS. HAINES: I apologize. I must have
21 hit that raised hand inadvertently. I don't have
22 a question. Sorry.

23 MS. CHAC: Okay. No problem.

24 There's another one -- oh, never mind.

25 There's one from Troy, T-R-O-Y.

1 Troy, you should be able to un-mute
2 yourself now.

3 MR. BEVILACQUA: Thank you. Troy
4 Bevilacqua with SunPower Corporation. Last name
5 is spelled B-E-V-I-L-A-C-Q-U-A.

6 A question on the no gas to property, is
7 that at the lot level or at the tract level? And
8 I ask that because a builder may acquire a piece
9 of property where the gas infrastructure has
10 already been installed.

11 MR. DODSON: Hi Troy. Thank you for your
12 comment.

13 As far as the specific exact requirements
14 for that particular question go, I'm not sure
15 that we have an exact definition laid out. The
16 general intent, however, is that we're aiming for
17 just no gas being fed to the building. So
18 whether this means a capped gas line for
19 retrofits or things like that, or simply not gas
20 infrastructure being built out for new
21 construction, the general intent is not to have
22 gas fed. But we -- I, personally, don't have a
23 ready answer for you in terms of the exact nature
24 of how that works.

25 MR. BEVILACQUA: Thank you.

1 MR. SCAVO: Yeah. This is Jordan.
2 That's an issue we are considering. I
3 think we address it in a later presentation. But
4 it's just presented as options for consideration
5 at this point.

6 Erica, who do we have next on the raised-
7 hand queue?

8 MS. CHAC: We have Nick Young, N-I-C-K,
9 last name, Y-O-U-N-G.

10 You can now un-mute yourself.

11 MR. YOUNG: Hi. Thanks this is Nick
12 Young with the Association for Energy
13 Affordability.

14 So it's not a ratepayer-funded program
15 but the various funding sources that low-income
16 housing projects have to apply to, to acquire the
17 majority of the funding for their projects, also
18 have energy requirements in their sustainable
19 building methods portions, primarily the Tax
20 Credit Allocation Committee and California Debt
21 Limit Allocation Committee, TCAC and CDLAC.

22 So I would just encourage the folks, and
23 maybe this will be covered later, but to consider
24 coordination with those agencies, as well, with
25 the Treasurer's Office to better align their

1 regulations and their sustainable building
2 methods portions with the goals of
3 decarbonization. That would help a lot.

4 MR. SCAVO: Excellent. Thank you for
5 your comment, Nick.

6 MS. CHAC: Okay. And then we have
7 another hand raised from Scott Blunk, S-C-O-T-T,
8 last name, B-L-U-N-K.

9 Scott, you can now un-mute yourself.

10 MR. BLUNK: Hi. This is Scott Blunk with
11 SMUD.

12 And looking at the presentation today,
13 and I saw the presentation that was posted, I
14 would just want to encourage trying to make the
15 program simple. I've run new construction
16 programs throughout the state and worked with
17 SMUD's team on this.

18 And I guess I'm questioning whether a
19 modeling requirement is really necessary?
20 Because we kind of -- or at least, maybe by zone
21 or by climate zone or by, you know, bands of
22 house sizes, like 1,000 to 2,000 square feet, we
23 can run some model homes in a climate zone and we
24 know what the carbon savings is going to be, plus
25 or minus; right? But to have the requirement of

1 models for every single home, or even if
2 you're -- even every property, it just gets
3 really burdensome.

4 And the majority of the savings is the
5 fact that they're not doing gas. And it's just
6 much simpler to do it that way. And it's,
7 really, the carbon savings going from a nine HSPF
8 to a ten HSPF is minuscule compared to going from
9 gas to electric.

10 And just trying to make the program -- or
11 trying to hope the program can be as simple as
12 possible, so just some suggestions.

13 Thanks.

14 MR. SCAVO: Thank you for your comments,
15 Scott. We dig into this issue a bit more in the
16 presentation later this afternoon by Tiffany on
17 the bill savings methodology.

18 Erica, who do we have next?

19 MS. CHAC: We have Ruchi Shah, R-U-C-H-I,
20 last name, S-H-A-S -- -H, sorry.

21 Ruchi, you should be able to un-mute
22 yourself now.

23 MS. SHAH: Yeah. Hi. I'm with
24 Tenderloin Neighborhood Development Corporation,
25 TNDC, in San Francisco.

1 Is the program neutral to what utilities
2 are we getting covered from in our portfolio? We
3 have both SFPUC and PG&E.

4 MR. DODSON: Hi. I think that question
5 is somewhat addressed in the next portion, so I
6 think that, hopefully, might be covered.

7 MS. SHAH: Okay. Thank you.

8 MS. CHAC: Okay. And we have another
9 question from Shelly Lyser, S-H-E-L-L-Y, last
10 name, L-Y-S-E-R.

11 You should be able to un-mute yourself
12 now.

13 MS. LYSER: Hi. Thank you. This Shelley
14 Lyser with the Public Advocates Office at CPUC.

15 I was looking through the slides and I
16 was wondering if there's an element in the
17 program design to address cost containment and
18 cost effectiveness of the various measures
19 proposed? I guess that's partly build into the
20 RFP review process to see, you know, which
21 applications are most viable. But I'm just
22 thinking in terms of sustainability, after the
23 pilots are completed, whether, you know, we'll be
24 using the most expensive mix of technologies or
25 choosing technologies that might be viable going

1 forward?

2 MR. SCAVO: Great. That's a good
3 consideration for us to have in mind. Thank you,
4 Shelly.

5 MS. CHAC: Okay. And we have another
6 question from Srinidhi Kumar, S-R-I-N-I-D-H-I,
7 last name, K-U-M-A-R.

8 You should be able to un-mute yourself
9 now.

10 MS. KUMAR: Hi. Name is Srinidhi Sampath
11 Kumar. I work with the California Housing
12 Partnership.

13 I wanted to hear what Nick had said about
14 coordinating with housing agencies but, also,
15 specifically highlight one of the programs called
16 Affordable Housing in Sustainable Communities
17 Program. And it's also a new construction
18 program and it specifically addresses
19 sustainability issues funded by the
20 (indiscernible).

21 To be more specific on one your questions
22 around building design to completion timeline, it
23 takes anywhere between three and five years. And
24 on the incentives, the two-step process, I would
25 advise you all to look to the Low-Income

1 Weatherization Program because the incentives are
2 more phased in and that actually help affordable
3 housing providers to have more funding,
4 especially in a time like this where funding is
5 often more limited, and they're also navigating
6 other issues coming through rental income loss.
7 So really trying to phase in incentives will be
8 really helpful.

9

10 And one thing that's more general is just
11 making sure this presentation is -- this
12 recording is available really early on so we can
13 have specific comments passed on, based on
14 relistening to the recording.

15 MR. DODSON: Thank you.

16 MR. SCAVO: Great. Thank you for that.

17 MR. DODSON: Sorry.

18 MS. CHAC: Okay. And --

19 MR. SCAVO: Thanks so much for that
20 comment.

21 MS. CHAC: -- we have another question
22 from Michael Colvin, M-I-C-H-A-E-L, last name, C-
23 O-L-V-I-N.

24 You should be able to un-mute yourself
25 now.

1 MR. COLVIN: Hi. Good morning. Michael
2 Colvin for Environmental Defense Fund.

3 The question is for you all to consider,
4 what are your metrics of success for a good BUILD
5 Program? Because when you're thinking about some
6 of the program design elements, you want the
7 program design to get you the results that you're
8 actually looking for. This goes back to an
9 earlier comment on some of the modeling, some of
10 the fund stacking, some of the cost containment
11 issues.

12 The goal here is not to, you know, ensure
13 that every single last dollar is the most
14 efficiently spent. The goal is not necessarily
15 to get every single last modeling to be
16 absolutely perfect. The goal is to treat as many
17 new home constructions and to remove as many
18 barriers to entry as possible.

19 And so as you're considering the program
20 design elements, really make certain that you're
21 going back to the root cause of what is it that
22 you're actually trying to accomplish? And then I
23 think a lot of the program design elements that
24 I'm seeing here will be -- the decisions will be
25 made for you and you'll say, well, that would be

1 nice to have if we have a different metric in
2 mind.

3 Thank you.

4 MR. SCAVO: Thank you for your comment,
5 Michael.

6 We have a few prescriptive requirements
7 that are built into the statute. And we've got
8 additional parameters that we're considering for
9 developing program evaluation. That is covered
10 in the final presentation in this workshop, so
11 stay tuned.

12 Also, I'd just like to take a moment. I
13 know a lot of these topics overlap. But if you
14 can, try to focus your comments on the content of
15 each presentation. We will have time for more
16 general comments toward the end. But in terms of
17 organizing our comments, it would help us to keep
18 the conversation focused on the presentation that
19 just occurred.

20 Thank you.

21 MS. CHAC: And that's --

22 MR. SCAVO: Erica, are there --

23 MS. CHAC: -- all the raised hands.

24 MR. SCAVO: Okay. Let's turn to the
25 phones.

1 MS. CHAC: No raised hands from the
2 phones either.

3 MR. SCAVO: Okay. Let's go to the Q&A
4 window. We have a question from Rachel
5 Kuykendall, that's R-A-C-H-E-L
6 K-U-Y-K-E-N-D-A-L-L.

7 She's asked if we can confirm how propane
8 use factors into the program structure?

9 Tiffany, can you address this please?

10 MS. MATEO: Hi. Jordan, can you hear me?

11 MR. SCAVO: Yes.

12 MS. MATEO: Okay. So the program is --
13 let me see what you're asking me. SB 1477 was
14 focused on advancing the state's market for low-
15 emission space and water heating equipment for
16 new and existing residential and nonresidential
17 buildings. And it doesn't particularize
18 infrastructure fuels. So I think (indiscernible)
19 more to the technologies that are eligible for
20 BUILD incentives but they won't be technologies
21 that use fuel.

22 And, hopefully, that answers that
23 question.

24 MR. SCAVO: Thank you, Tiffany.

25 We have an additional question from Ruchi

1 Shah, that's R-U-C-H-I S-H-A-H.

2 And they've asked, "Does it matter to the
3 program if we are getting power from SFPUC or
4 from PG&E?"

5 Tiffany or Geoff, jump in if I'm
6 mischaracterizing this, but I think it just
7 depends on which gas provider you have. So as
8 long as you're in one of the investment-owned gas
9 utilities --

10 MR. DODSON: Yeah.

11 MR. SCAVO: -- those are the ones we're
12 targeting. And it doesn't matter who your
13 electric utility is.

14 MR. DODSON: Yeah. Hi, Jordan. That's
15 correct. And I believe Erica will cover that in
16 her very next portion.

17 MR. SCAVO: Great. Thank you. That
18 looks like it's it for comments and questions.

19 So let's go to Erica.

20 MS. CHAC: Great. Thanks everybody. Hi.
21 My name is Erica Chac and I'm one of the
22 supporting BUILD staff members. Today, I will be
23 discussing eligible applicants that can apply for
24 BUILD, eligible projects that qualify, and
25 eligible technologies for incentives.

1 Next slide please.

2 Eligible applicants for the BUILD Program
3 are building owners or developers of new
4 residential housing. The CPUC decision further
5 requires that the first two years of the program
6 serve eligible applicants for developing low-
7 income residential housing. In the future, we
8 may consider expanding that (indiscernible).

9 Low-income residential housing is defined
10 as either, one, a multifamily residential
11 building of at least two rental housing units
12 that is deed-restricted and is either both
13 located -- and is either/or both located in a
14 disadvantaged or low-income community, according
15 to the statutory definitions, or at least 80
16 percent of the households living in the buildings
17 have incomes at or below 60 percent of the area
18 median income, or two, low-income residential
19 housing can be an individual low-income
20 residence.

21 The CPUC decision and BUILD outlines
22 specific eligibility project criterion. One of
23 them is eligible projects must be located in one
24 of the following gas territories, Southern
25 California Gas Company, PG&E, SDG&E, or Southwest

1 Gas Corporation. To comply with the CARB rules
2 regarding cap and trade funds, the programs must
3 proportionately direct funds to the gas
4 corporation service territories where the funds
5 are derived. After the initial two years of
6 implementation, the funds may be spent outside
7 the individual gas corporations territory if
8 there are any unspent funds.

9 SB 1477 requires that projects receive
10 incentives under the program must result in
11 utility bill savings for the tenants. And
12 eligible projects will need to follow the all-
13 electric prescriptive pathway or the performance
14 pathway to show compliance to the Energy Code as
15 projects are intended to beat the mixed-fuel
16 homes prescriptive approach.

17 Eligible projects must be new residential
18 housing. This is defined in the decision as a
19 building that has never been occupied, or an
20 existing building where at least 50 percent of
21 the exterior weight-bearing walls are removed, or
22 an existing building that has been repurposed for
23 housing and it's original use was not for
24 residential.

25 The decision also mandates that eligible

1 projects must be all-electric and have no hookup
2 to the gas distribution grid. For new homes that
3 have not been occupied, having no hookup to the
4 gas means no gas pipelines from the main pipeline
5 in the road to the house. And for existing homes
6 that meet the new residential housing definition
7 and have existing natural gas pipelines, we are
8 considering whether they must be capped at the
9 meter or capped to the gas line in the home.

10 So this table lists low-emission
11 technologies that lead to GHG reductions for
12 different energy end uses. These technologies
13 could be eligible for basic incentives as they
14 can be modeled through CBECC and, therefore,
15 their performance can be captured and
16 incorporated into a variable incentive structure.

17 In order for the equipment to be
18 eligible, they must also meet the criteria listed
19 in the minimum requirements column. We've
20 selected these requirements with the
21 considerations that they set a bar for higher
22 efficiency and are still feasible for developers
23 and builders.

24 The decision also states that there must
25 be a list of eligible equipment. We recognize

1 that there are existing lists that have been
2 established. And rather than creating a new list
3 and a new set of criteria, we're considering
4 using these existing lists listed in the last
5 column. These lists have already been well
6 established and continuously maintained by other
7 entities or the CEC.

8 For space conditioning, the eligible
9 technology is a heat pump that has a heating
10 seasonal performance factor, or HSPF, or greater
11 than ten. The HSPF is used to measure the
12 efficiency of air source heat pumps and is the
13 ratio of heat output over the entire heating
14 season to electricity use. The Northeast Energy
15 Efficiency Partnership, or NEEP, has established
16 a list of air source heat pumps that can function
17 in cold climates.

18 Water heating can also utilize heat pumps
19 that are at least NEEA Tier 3. These
20 specifications are established by the Northwest
21 Energy Efficiency Alliances, or NEEA, with
22 considerations to performance, comfort,
23 challenges to installation, and demand response.
24 NEEA has posted a qualified products list for
25 their NEEA Tier 3 and above heat pump water

1 heaters.

2 The other option for water heating can be
3 solar water heaters that have electric backup.
4 Onsite PV generation can also be included. And,
5 if so, PV modules and inverter models must be
6 listed on the Energy Commission's Solar Equipment
7 List. The PV system will need to be compliant to
8 Joint Appendix 11 of the Energy Code, which are
9 qualification requirements for photovoltaic
10 systems.

11 Onsite energy storage is another eligible
12 technology. And the battery or energy storage
13 device must also be listed on the Solar Equipment
14 List. The system must meet Joint Appendix 12,
15 the qualifications requirements for a battery
16 storage system. Keep in mind that J-12, for this
17 iteration, requires that an energy storage system
18 be paired with onsite PV systems.

19 Building envelope efficiency measures may
20 also be considered and they must be better than
21 the current prescriptive requirement in the
22 Energy Code. These could be roof, attic or wall
23 insulation, and windows. Depending on the
24 climate zone, the R value for the material will
25 vary.

1 Eligible projects must also utilize heat
2 pumps for space conditioning, or either heat
3 pumps or solar water heaters for water heating.
4 These are the targeted technologies for the BUILD
5 Program. However, other technologies may be
6 considered if they achieve comparable GHG
7 emission reductions.

8 It is important to note, also, that PV
9 and building envelope efficiencies may also be
10 required for certain projects to meet the BUILD
11 requirements that projects have to show bill
12 savings for tenants.

13 Kicker incentives will also be offered to
14 technologies that cannot be easily modeled in
15 CBEC but still offer further GHG reductions.
16 This table lists out technologies that we are
17 considering.

18 Heat pumps that utilize low global
19 warming potential refrigerants of less than 750
20 can qualify for a kicker incentive.

21 Additionally, we're considering kicker
22 incentives for load flexibility.

23 Heat pump water heaters that are JA13
24 compliant can qualify for kickers.

25 And other appliances that are CT 2045

1 compliant or any other open source modular
2 interface standard can also qualify for kicker
3 incentives.

4 Induction cooktops may be considered.

5 And heat pump clothes dryers also offer
6 further energy efficiency than standard electric
7 dryers but they must be ENERGY STAR certified.

8 SB 1477 requires that BUILD develops a
9 process for evaluating new technologies that were
10 not listed in the tables I've shown previously.

11 We are taking into consideration existing
12 processes and possibly incorporating some new
13 processes. Adopting an existing process would
14 mean incorporating the new technology into CBECC.
15 And manufacturers would need to go through the
16 process to get their technology into CBECC.

17 There is, already, an existing process.
18 And we would need information on the technology
19 to add to CBECC, which may require designing
20 testing procedures, designing lab setups, and the
21 actually testing to gather the data. This
22 verification process can be timely and costly but
23 will provide assurance that the new technology is
24 working as expected.

25 If performance is not verified, the

1 product will not earn GHG credit under the BUILD
2 Program's basic incentive structures. We may,
3 however, consider these technologies for kicker
4 incentives. A new process may be developed for
5 these technologies and other unique technologies
6 that don't quite fit into the CBECC mold. These
7 may be evaluated on a case-by-case basis. And we
8 will need to understand the GHG reduction
9 potentials, performance, and possibly safety or
10 quality of the technology. However, there are
11 some resource constraints and we may have to rely
12 on processes developed in that industry to
13 evaluate the technology.

14 The TECH Initiative also has a
15 requirement to develop a process for evaluating
16 new technologies in space and water heating, so
17 there may be an opportunity to leverage some of
18 TECH's processes under development for
19 evaluating. However, we are open to suggestions
20 or comments you may have regarding this topic or
21 anything about eligibility.

22 Okay. And it looks like we have one
23 raised hand from Ruchi Shah.

24 You should be able to un-mute yourself
25 now, Ruchi.

1 MS. SHAH: Hi. This is Ruchi again from
2 TNDC. And thanks, Erica, for clarifying, but I'm
3 still a bit confused about in a scenario where we
4 have all-electric buildings, and if we are
5 getting funding from the City of San Francisco,
6 the first right to serve is from SFPUC. Does
7 that mean that we are not eligible for this
8 program?

9 MS. CHAC: As long as they fall within
10 one of the gas territories, then they should be
11 eligible.

12 And, Geoff, if you don't mind going back
13 up to slide 27 with the map of the natural gas?
14 There you go. Yeah.

15 So you should be able to fall into one of
16 those categories.

17 MS. SHAH: Got it. So you're saying we
18 just have to fall in the gas territory, even if
19 we are not getting gas service on our site?

20 MS. CHAC: That's correct. Yeah.

21 MS. SHAH: Okay. Perfect. Thank you.

22 MR. SCAVO: Are there any other raised
23 hands? It doesn't look like it.

24 MS. CHAC: No. It looks like that was
25 it.

1 MR. SCAVO: Anyone from the phones?

2 MS. CHAC: No raised hand from the
3 phones.

4 And just as a reminder, for phones, to
5 raise your hand, it's star nine.

6 Oh, there a question from Srinidhi Kumar.

7 You should be able to un-mute yourself
8 now.

9 MS. KUMAR: Hi. Thank you for the
10 presentation.

11 Really just curious about how you're
12 planning to calculate the savings, for instance,
13 as this topic? I know there's been a lot of
14 discussion in the background. If you could just
15 talk more about that part? That would be great.

16 MS. CHAC: Yeah. So there will be a bill
17 saving methodology presentation right after mine
18 from Tiffany. If you don't mind holding, maybe
19 she can cover that in her presentation. And
20 there will also be time for questions after HERS.

21 MS. KUMAR: Um-hmm. Yeah.

22 MS. CHAC: Great. And then we have a
23 question from Michael Colvin.

24 You should be able to un-mute yourself
25 now.

1 MR. COLVIN: Hey, Erica, thank you again
2 so much.

3 I'm curious if you considered
4 alternatives to doing the full modeling into
5 CBECC for some of these new technologies,
6 especially recognizing that these are pilot
7 programs and, you know, the time and intensity
8 and expense, those words that you used, got me
9 very nervous. I'm especially worried about a
10 false perception as to this is really where we
11 want to be spending our time and efforts.

12 In energy efficiency, we have new
13 technologies emerge all the time. And we do sort
14 of a deemed incentive before we do anything into
15 the DEER Database. And so I'm wondering if
16 there's some sort of alternative pathway to start
17 estimating greenhouse gas emissions reductions
18 that will get you close enough for the purposes
19 of what we're looking for this program that will
20 be far less time intensive and expensive for all
21 involves?

22 So I'm wondering if you considered
23 anything, or if there are other options, or if
24 getting stuff into CBECC is the only way to do
25 this?

1 Thanks.

2 MS. CHAC: Thanks for --

3 MR. SCAVO: Thanks for your comment.

4 MS. CHAC: Yeah.

5 MR. SCAVO: This is something we'll
6 address in more detail in Tiffany's presentation
7 on the bill savings methodology.

8 Do we have any other raised hands?

9 MS. CHAC: No. It looks like that's it.

10 MR. SCAVO: Okay. We've got a few
11 questions in the Q&A window.

12 The first is from Nick Young, N-I-C-K Y-
13 O-U-N-G. They ask, "Under eligible water heating
14 systems the NEEA Standards are only for in-unit
15 HPWH systems, not central. How will the BUILD
16 Program incentivize central HPWH, the best
17 approach for many low-income multifamily
18 projects?"

19 MS. CHAC: Yeah. That's a good question.
20 I was wondering, this might be a little more in
21 Tiffany's wheelhouse.

22 By any chance, Tiffany, do you have more
23 insight on this one?

24 MS. MATEO: Sure. So, yeah, like Erica
25 said, we are looking at other technologies, as

1 long as they have comparable GHG savings as what
2 was outlined in the table.

3 And then I, also, I think there's an
4 effort right now with NEEA to incorporate central
5 heat pump water heaters into their evaluation
6 process, so we're also staying tuned to that.

7 MR. SCAVO: Thank you, Tiffany.

8 Our next question comes from Scott Blunk,
9 that's S-C-O-T-T B-L-U-N-K. They say, "Slide 16
10 says the projects must meet minimum building
11 codes and have no natural gas hookup. Why then
12 in slide 29 does it require beyond code minimum
13 efficiencies? This adds costs with very little
14 carbon benefit. And if it is a bill savings
15 assurance that would be -- if it is a bill
16 savings assurance, that would be the reason for a
17 model to verify."

18 So I think slide 16 lays out minimum
19 requirements to demonstrate eligibility for the
20 program. And slide 29 identifies what types of
21 equipment or technology would actually qualify
22 for an incentive.

23 Geoff or Tiffany or Erica, feel free to
24 jump in if you'd like.

25 MS. CHAC: Yeah. No, that's correct. So

1 slide 16 would be the minimum requirements that
2 every project must hit. And then slide 29 is
3 like for further incentives.

4 MR. SCAVO: Our next question comes from
5 Marshall Hunt, that's M-A-R-S-H-A-L-L H-U-N-T-O.
6 They ask, "Will there be an additional kicker for
7 GWPs below 150?"

8 MS. CHAC: Tiffany, correct me if I'm
9 wrong, but for now we're considering kickers for
10 below 750. But I see where you're coming from
11 and we may take that into consideration.

12 MR. SCAVO: Thanks Erica.

13 MS. CHAC: Um-hmm.

14 MR. SCAVO: The next question comes from
15 Samantha Barden, S-A-M-A-N-T-H-A B-A-R-D-E-N.
16 They ask, "Would mini split/ductless heat pumps
17 or VRF systems be accepted as air source heat
18 pumps or will they need to be considered as new
19 technologies?"

20 MS. CHAC: I believe mini splits are
21 still considered for air source heat pumps. They
22 might already have some listed on their Eligible
23 Technologies List.

24 MR. SCAVO: Thanks Erica.

25 And thanks for the question, Samantha.

1 That's something we can keep in mind as we get
2 further along in designing the program.

3 We have another question from Nick Dirr,
4 N-I-C-K D-I-R-R. They ask, "As you mentioned, it
5 will be important to have a pathway for all
6 electric measures, in addition to those listed in
7 the table. For example, some heat pump HVAC
8 equipment does not receive an HSPF value based on
9 its appliance classification, such as VRF systems
10 or PTHP systems, as well as" -- oh, sorry, "as
11 well as commercial-sized HVAC and water heating
12 equipment which do not have residential
13 efficiency values. Thank you for keeping these
14 options open."

15 Thank you for your comment, Nick. We'll
16 keep it under consideration.

17 Our next question comes from Randall
18 Higa, R-A-N-D-A-L-L H-I-G-A. They ask, "To
19 follow up on central systems, how will the
20 program treat a multifamily building that is all-
21 electric but have units served by a central gas
22 water heating system? Will this be eligible for
23 BUILD?"

24 MS. CHAC: So per the decision, all
25 eligible projects have to be all-electric, so a

1 gas water heating system wouldn't qualify.

2 MR. SCAVO: Thanks Erica.

3 MS. CHAC: Um-hmm.

4 MR. SCAVO: And the last question from
5 Don Price, it's D-O-N P-R-I-C-E. "Is it possible
6 that, in the future, natural gas pipelines may be
7 used to provide hydrogen for fuel cell vehicles?
8 Has this possibility been considered?"

9 MS. CHAC: Yeah. I'm sorry.

10 MR. SCAVO: I'm sorry. Go ahead.

11 MS. CHAC: Go ahead, Jordan.

12 Yeah, so for this one, again, per the
13 CPUC decision, we're required that all projects
14 must be all-electric at the moment. But thank
15 you for the comment. We'll keep that in
16 consideration.

17 MR. SCAVO: And in terms of considering
18 these alternative fuels, yeah, I don't know if
19 we've looked at this in particular but this is
20 something we can keep in mind. Thank you.

21 We have a question from Zainab Badi,
22 Z-A-I-N-A-B B-A-D-I. They've asked, "For
23 buildings located in low-income communities, is
24 there a requirement for how many units within
25 that building must be affordable units reserved

1 for low-income households?"

2 There are -- there's a statutory
3 definition for what qualifies as a low-income
4 community located in SB 1477. We use
5 CalEnviroScreen to identify those communities. I
6 can't speak in detail about that now but we do
7 have a working statutory definition for how to
8 define these communities. Thank you for your
9 question.

10 Do we have any other comments or
11 questions? Okay.

12 Let's pause here for folks to stretch
13 their legs and we'll come back at 10:20.

14 Thank you.

15 (Off the record at 10:10 a.m.)

16 (On the record at 10:20 a.m.)

17 MR. SCAVO: Okay. We're back.

18 The next presentation is by Tiffany Mateo
19 on the bill savings methodology.

20 Tiffany, go ahead and take it away.

21 MS. MATEO: Thank you. Hi. My name is
22 Tiffany Mateo and I'm on the BUILD Team. I work
23 in the Efficiency Division at the Energy
24 Commission. And today I will present the bill
25 savings methodology section.

1 SB 1477 directs the CPUC to ensure that
2 incentives reserved for low-income residential
3 housing does not result in higher utility bills
4 for the building occupant. Proving bills will
5 not increase is challenging during to
6 uncertainties in how occupants will use a
7 building, varying weather conditions, et cetera.

8 In SB 1477, one of the intents of the
9 legislature of the BUILD Program is bill savings
10 for the building occupants. It will be up to the
11 program implementor to define how and by how
12 much. In Staff's we will need to specify
13 sufficient savings as a safety factor to ensure
14 the resulting projects comply with the law. Some
15 estimated bill savings is logical to ensure that
16 there is no bill increase.

17 In order to ensure that incentives that
18 are reserved for new low-income housing do not
19 result in higher utility bills for the building
20 occupant, the CPUC is directing the CEC to
21 develop or adopt a tool on methodology to measure
22 bill savings. This bill savings tool or
23 methodology will be reviewed by the program
24 evaluator and CEC will make changes based on the
25 evaluators recommendations. I will refer to the

1 bill savings tool as the bill savings
2 methodology.

3 Staff believes that the methodology, and
4 not necessarily a distinctive separate tool, is
5 sufficient to calculate bill savings for building
6 occupants.

7 An important part in developing a bill
8 savings methodology will be defining exactly what
9 constitutes bill savings. Does this mean that
10 there will be no utility bill increase on a
11 monthly energy utility bill or no utility bill
12 increase quarterly or annually, meaning the
13 energy utility bill may increase in one month, so
14 long as it decreases by at least the same amount
15 in another month?

16 Also, how many years should be analyzed
17 for bill savings? Is 15 years an appropriate
18 time frame to assess bill savings? Usually,
19 after the initial 15 years of occupancy, deed-
20 restricted affordable housing projects undergo
21 the tax credit re-certification (phonetic)
22 process. And multifamily owners closely examine
23 and evaluate necessary major building
24 improvements. We are asking for input on these
25 options.

1 Once those questions are answered, we
2 need to decide what utility rates to use. The
3 California Alternative Rates for Energy Program,
4 or CARE Program, offers discounts on electric and
5 natural gas rates to qualifying low-income
6 (indiscernible) customers. Since the bill
7 savings methodology will be used specifically for
8 low-income housing, should we use CARE rate or
9 standard rate? And within those rates there may
10 be different rate tiers. Is it appropriate to
11 use the lowest tier rate?

12 Also, utility rates change. How often
13 should the utility rates be updated for use in
14 this bill savings methodology, quarterly,
15 annually? Would updating the rates with
16 provisions to the bill's Implementation Plan,
17 which will be every two years, be appropriate?
18 We're seeking in put on these parameters for the
19 bill savings methodology.

20 And, right, the utility rate is
21 important, so using accurate rate projections
22 will be important for the long-term bill savings
23 analysis. The rate projection shown here will
24 use the Utility Integrated Resource Plan. The
25 short-term rate projections are based on

1 currently filed general rate cases. And further
2 rate projections are based on historic rate
3 increases and estimates provided by electric
4 utilities. We are open to looking at other
5 suggestions for utility rate change projections
6 that may be more appropriate to use for the bill
7 savings analysis under the BUILD Program.

8 Now, onto establishing baselines. The
9 focus of the BUILD Program will be on new low-
10 income housing and mainly newly constructed
11 housing. Since these buildings will be newly
12 constructed, there will be no historic data of
13 utility bills. In order to calculate bill
14 savings, we will need to set a baseline for these
15 projects. Staff prefers us to use the mixed-fuel
16 building meeting the 2019 Title 24 prescriptive
17 standards as a baseline. This is consistent with
18 the requirements for setting a GHG emissions
19 baseline within the BUILD Program.

20 In order to make the baseline scalable
21 for projects with a range of sizes, we have
22 identified an option to set the bill savings
23 baseline on a unit or bedroom level. By setting
24 the baseline this way, projects of any size can
25 be compared to a single baseline, instead of

1 having to set an individual specific baseline for
2 each project.

3 The main goal of the bill savings
4 methodology is to accurately estimate utility
5 bills for building occupants. This means that it
6 should project-specific. The main pathway for
7 doing this is to estimate the energy use of the
8 designed building and use results with the
9 applicable utility rates to determine utility
10 bills.

11 Staff has identified the following
12 methodology options. One, Staff evaluates many
13 of decarbonization measure packages to show bill
14 savings and carbon savings, or applicants prepare
15 detailed modeling of each project to document
16 bill and carbon savings.

17 Under the first option, CEC Staff will do
18 analysis with CBECC and set performance
19 requirements to achieve bill savings. CBECC is
20 the California Building Energy Code Compliance
21 software and takes input on building envelopes
22 and mechanical system design and calculates
23 energy usage of a building.

24 CEC Staff can do up-front analysis to
25 determine what building performance criteria must

1 be met by climate zone to show utility bills
2 savings. This could include performance
3 efficiency of mechanical systems, additional PV
4 generation beyond what is required in code and/or
5 building envelope performance. These performance
6 criteria may differ in different climate zones.
7 This would eliminate the need for the applicant
8 to do model runs and submit their own bill
9 savings analysis.

10 Under the second option the BUILD Program
11 applicant will use building modeling software and
12 utility rates to determine bill savings of their
13 proposed all-electric building, compared to a
14 mixed-fuel baseline. This may include using the
15 California Utility Allowance Calculator, or the
16 CUAC. The CUAC is used by the affordable housing
17 industry and the California Tax Credit Allocation
18 Committee, or TCAC, to determine utility
19 allowances for deed-restricted properties.
20 However, major updates to CUAC software are
21 needed to satisfactorily maintain it. And any
22 changes to or utilization of the CUAC should be
23 approved by TCAC.

24 And now I will invite participants to
25 comment or ask clarifying questions.

1 MS. CHAC: We have two raised hands. One
2 of them is from Merrian.

3 You should be able to un-mute yourself
4 now.

5 MS. BORGESON: Hi. This is Merrian with
6 NRDC.

7 I wonder if you could describe how or if,
8 when a building goes through the modeling process
9 with CBECC's currently, if rates are in there at
10 all? I'm still not understanding if this would
11 be a normal part of going through the performance
12 path of Title 24 or like how much additional work
13 would be required for the building owner
14 themselves or the building designer/developer?
15 Could you just outline that a bit more so we
16 understand that?

17 MS. MATEO: Sure. So, currently, the
18 rates are not included in CBECC. But what we
19 would use are the hourly energy consumption
20 output. And then we have rates, hourly rate
21 tables, available --

22 MS. BORGESON: Um-hmm.

23 MS. MATEO: -- to us, so we would
24 apply -- it's called the AD 760 (phonetic)
25 profile -- to rates.

1 MS. BORGESON: Got it.

2 MS. CHAC: Thanks Tiffany.

3 We have another question from Michael
4 Colvin.

5 Michael, you should be able to un-mute
6 yourself now.

7 MR. COLVIN: Tiffany, can you go back to
8 slide 38? I just have a clarifying question on
9 something on that slide.

10 MS. MATEO: Um-hmm.

11 MR. COLVIN: So for the CARE rates, the
12 low-income customers program, I'm confused why
13 you have these discount rates here. By statute,
14 the natural gas discount rate for CARE is 20
15 percent. And for the large investor-owned
16 utilities, right now the current discount rate is
17 30 to 35 percent, for the small utilities it's 20
18 percent.

19 So I'm trying to figure out if you're
20 proposing something different for bill savings
21 parameters or what you're trying to accomplish
22 here? And it's not clear to me why these aren't
23 just what the actual CARE discount rates are.

24 MS. MATEO: Oh, okay. Yeah. This --
25 we're not proposing a new rate or anything. This

1 must be a typo. Apologies.

2 MR. COLVIN: Okay. I have one other,
3 since I have the microphone, one other clarifying
4 comment, which is when you're considering bill
5 savings, there's both the building stock, there's
6 also the expected useful life of the product.
7 And that might be a far easier way to do a
8 comparison on bill savings. There's so many
9 other factors of the life of the building, that
10 15-year time horizon, that you might want to be
11 thinking about the product. What's the amount of
12 gas use versus the amount of electric use? And
13 then just look at the deltas and you can limit
14 that to the average expected life of the gas
15 product. And that way you can, you know, contain
16 your bill savings to a much narrower set of
17 factors.

18 MS. MATEO: Okay. Great. Thanks for the
19 suggestion. And any comments or specific data
20 you have, we would really appreciate sending our
21 way during the comment period.

22 MR. SCAVO: Do we have any other raised
23 hands?

24 MS. CHAC: No more raised hands.

25 MR. SCAVO: Anyone on the phone?

1 MS. CHAC: No one on the phone.

2 MR. SCAVO: And no questions in the Q&A
3 chat app.

4 We are pretty well ahead of schedule, so
5 I think we will just advance to the next
6 presentation, if you wouldn't mind moving the
7 slide deck forward, Geoff?

8 MS. CHAC: Oh, Jordan, there's one
9 question in the Q&A that just popped up.

10 MR. SCAVO: Great. Let's cover that.

11 This question is from Samantha Barden,
12 S-A-M-A-N-T-H-A B-A-R-D-E-N. Her question is:
13 "Would existing home energy modeling softwares be
14 allowed to demonstrate bill savings? For
15 example, REM rate or other HERS softwares?"

16 MS. MATEO: So I'm not personally
17 familiar with the softwares. But as long as the
18 modeling capability is at the same level as CBECC
19 and other Energy Code-compliant software, that
20 should be okay.

21 MR. SCAVO: Thanks Tiffany.

22 Samantha, this may be one where it would
23 benefit to go into a bit more detail in written
24 comments to help us consider these. Thank you.

25 Are there any other questions on the last

1 presentation? Okay.

2 We'll move into the next presentation,
3 which on the technical assistance provider and
4 the outreach plan. This section will provide an
5 update on technical assistance and outreach in
6 support of BUILD.

7 We don't have prescriptive statutory or
8 regulatory requirements pertaining to technical
9 assistance, other than that the BUILD Program
10 must offer such assistance to prospective
11 applicants and that details for technical
12 assistance must be included in the Implementation
13 Plan.

14 The underlying purpose of the technical
15 assistance is to increase program participation
16 and funding among residential projects located in
17 disadvantaged communities or low-income
18 communities.

19 As the BUILD administrator, the Energy
20 Commission will issue an RFP that specifies
21 technical and programmatic forms of assistance
22 for the third-party contractor to provide. As we
23 noted earlier this morning, however, the Energy
24 Commission must receive budgetary approval to
25 issue an RFP for a technical assistance provider.

1 We expect to hear back on our budgetary request
2 sometime this summer. Should we receive approval
3 to issue a request for proposal from a third-
4 party technical assistance provider, we will
5 issue it in the third quarter of 2020.

6 In addition to helping applicants with
7 BUILD documentation requirements, the technical
8 assistance provider will assist interested
9 stakeholders in navigating industry and
10 regulatory barriers to low-income housing
11 development. We're interested to hear
12 recommendations from stakeholders of what
13 specific forms of technical assistance might best
14 serve the program?

15 As with technical assistance, we're also
16 required to provide details on outreach in the
17 Implementation Plan. Outreach is necessary to
18 facilitate a program awareness campaign to target
19 audiences as needed. The outreach plan shall
20 encourage applicants -- shall encourage
21 applications from low-income residential housing
22 located in disadvantaged or low-income
23 communities, as well as provide basic information
24 to interested parties on related programs that
25 may be of interest to the applicant.

1 To approaches are under consideration.
2 We can either combine outreach and technical
3 assistance, creating a sort of one-stop-shop for
4 information and program support for prospective
5 applicants, or we can retain outreach activities
6 in-house, leveraging Energy Commission Staff
7 expertise to reach out to the developer
8 community. We'd appreciate hearing from
9 stakeholders whether one approach or the other
10 would be more beneficial?

11 So now we will open the floor to public
12 comments. Please restrict comments to three
13 minutes. And use the raise-hand feature if
14 you're on Zoom, then we'll get to the phones, and
15 then the Q&A window.

16

17 Are there any comments or questions?

18 MS. CHAC: We have a question from Sean
19 Armstrong.

20 Sean, you should be able to un-mute
21 yourself now.

22 MR. ARMSTRONG: Good morning. Thank you.

23 So affordable housing can't accept
24 rebates after a project's construction loan has
25 been closed, which is usually the case with

1 rebates. In affordable housing, the consequence
2 of that is that the development company itself
3 accepts the rebate. But because it's too late,
4 it's generally not influential in the design
5 because all the design happens at, you know, the
6 application stage, draft design stage. The
7 rebates don't arrive during that period of time.
8 So this is true for Peoples' Self-Help Housing.
9 Their rebates do not go to the developments.
10 This is true for Danker (phonetic) Communities.
11 This is true for the Pacific Companies. I've
12 seen this consistently, that there aren't rebates
13 for the developments.

14 And the funding, the funding,
15 functionally, goes to the developer. Like the
16 really, really, really rich person gets the
17 rebate as opposed to low-income housing
18 development gets it, or maybe the nonprofit gets
19 it, but there's lots of for-profits that do
20 affordable housing.

21 So when I made comments, I suggested that
22 you split up the rebate so that some of it's
23 given at the commitment to go all-electric stage,
24 which would allow the money to actually help the
25 affordable housing development.

1 Did I not -- did I hear that you guys are
2 only providing rebates at the very end, after
3 proof of the project? And if so, can you justify
4 why you would not give the rebate earlier in the
5 development to actually help the low-income
6 housing?

7 MR. SCAVO: Yeah. Geoff, you spoke to
8 this in your presentation. Would you like to
9 respond to Sean's inquiry?

10 MR. DODSON: Yeah. Hi. Thanks Sean.
11 So the outline of the application process
12 that I did earlier was just an approach that we
13 could use. And what I was presenting was, you
14 know, pretty much based off of kind of tried and
15 true approach from a previous program. I did,
16 however, specifically note in one of my slides
17 that we are aware that this can pose an issue for
18 low-income building developers. And so we do --
19 you know, part of this intent on this workshop is
20 specifically to get feedback on alternative
21 approaches that would better suit our low-income
22 building developers.

23 And so your comment is something that we
24 do want to hear and it's something that we are
25 taking into consideration strongly. And we do

1 want to explore opportunities that are helpful to
2 our participants and not a burden, so --

3 MR. ARMSTRONG: That's terrific.

4 MR. DODSON: Yeah.

5 MR. ARMSTRONG: I appreciate it because,
6 functionally, it ends up undermining the
7 sustainability consultants. This is a very
8 frequent situation where the sustainability
9 consultants try to advocate for the efficiency
10 measures but there's no money that's dependable.
11 And the developers don't make decisions based on
12 speculative funding that shows up. As you're
13 also saying, it's too late. It actually causes
14 problems with the financing to have additional
15 money, like \$100,000 show into develop. It's
16 kind of illegal. You're supposed to announce all
17 funding that comes into a development because
18 there's a lot of investors who want to claim the
19 money.

20 So the current situation is just making
21 affordable housing developers do workarounds that
22 don't favor the development and don't reinforce
23 electrification. So thanks for taking that
24 comment.

25 MR. DODSON: Yeah. And thank you for

1 providing that comment. And like I said, you
2 know, those are the types of things that we do
3 want to hear so that we can, you know, take this
4 fully into consideration and make sure that, you
5 know, we're building a program that satisfies
6 concerns from all levels.

7 MR. ARMSTRONG: Thanks.

8 MR. DODSON: Yes. Definitely.

9 MR. SCAVO: Do we have any other raised
10 hands?

11 MS. CHAC: We do. We have another one
12 from Merrian.

13 Merrian, you should be able to un-mute
14 yourself now.

15 MS. BORGESON: Great. Thank you. So I
16 think that this is going to be one of the most
17 important elements of getting this right for low-
18 income developers. I think that there's a few
19 elements that are going to be really important.
20 There's definitely, what you mentioned, like the
21 regulatory barriers, helping people through the
22 paperwork, getting people's attention so they
23 actually know about it. That's going to be a
24 huge part of just making this program successful.

25 But the other part is going to be the

1 actual technical assistance where there's support
2 provided directly to the mechanical engineers,
3 designers, and architects who are actually
4 working on the design of these buildings early
5 on.

6 And I'd encourage the CEC to consider a
7 joint RFP to an organization, or perhaps it might
8 be more than one organization that works
9 together, that, A, already knows the affordable
10 housing development community and knows who to
11 get the word out to, already has those
12 relationships and connection, working in
13 partnership with the CEC, because I know you guys
14 have many of those relationships too. But I
15 think it will be important to have an advocate
16 that is really charged with this, along with the
17 technical expertise. That is really going to be
18 what enables many of the developers who may or
19 may not have experience with all-electric
20 developments to do it more quickly.

21 One of the things that NRDC worked with a
22 number of organizations to host a few weeks ago
23 was a listening session that highlighted just
24 four developers in the state, all of whom are
25 doing all-electric buildings. And it was a

1 conversation that focused on new buildings.
2 We'll put this on the record, just to it's
3 accessible to everyone. We have it recorded.
4 But it was really emphasizing that conversation
5 that many of those developers are just starting
6 this. It's new for them.

7 The first time is often more expensive,
8 just because they're not familiar with how to do
9 all-electric yet. They're trying new
10 technologies. Their mechanical engineers may
11 have never done this before. So there's sort of
12 this direct technical, and by technical I mean
13 like engineering side of the building that will
14 be really important to provide direct support for
15 to make sure that they have the right sorts of
16 skills and expertise and guidance from folks who
17 have done this in other buildings, and not just
18 on the outreach side. And so we'll provide more
19 detail on this in our comments.

20 The other thing that came up through that
21 conversation that we had with developers was the
22 need for a coordinator, at least for the first
23 few projects, and maybe more. An employee of the
24 Fresno Housing Authority had a really wonderful
25 example, where they've been doing this for longer

1 than most developers in the state and have been
2 able to have sort of a coordinator role within --
3 that they hire for their projects that allow them
4 to put all the pieces together in a way that
5 really made a difference for them to do these
6 fast and affordably.

7 So there may be even support for like a
8 coordinator role, maybe even for the first
9 project or two for each developer that has not
10 done all-electric yet. I think there's a number
11 of ways you can structure it. But talking to
12 developers and getting their advice on,
13 specifically, what targeted investments, targeted
14 technical assistance will make the most
15 difference for them, I think is going to be vital
16 to making this work for the audience you're
17 seeking to serve.

18 Thanks.

19 MR. SCAVO: Thank you so much for those
20 insights, Merrian.

21 We have a raised hand from the dais.

22 Commissioner Rechtschaffen, would you
23 like to speak?

24 COMMISSIONER RANDOLPH: Thank you,
25 Jordan. This may follow up on what Merrian just

1 said.

2 I don't know if you were already planning
3 to do that, but I would suggest, in crafting the
4 outreach plan, you consult with the CEC-CPUC
5 Disadvantaged Communities Advisory Group and get
6 their input and advice. They're meeting this
7 Friday, in fact, but you can also just direct
8 inquiries to them off meeting cycle as well.

9 MR. SCAVO: Excellent. Thank you for
10 that guidance.

11 Do we have any other raised hands?

12 MS. CHAC: No other raised hands.

13 MR. SCAVO: Is there anyone on the phone
14 that would like to raise their hand? Okay. And
15 we --

16 COMMISSIONER MCALLISTER: Hey, Jordan,
17 this is Andrew McAllister. I'd like to make a
18 comment here.

19 MR. SCAVO: Please do.

20 COMMISSIONER MCALLISTER: Hey. So
21 thanks, everybody, for those comments and for
22 your engagement.

23 I definitely wanted to -- I was thinking
24 the same thing about the DCAG, so glad to hear
25 Commissioner Rechtschaffen suggest that. That's

1 a resource that we need to use, not just in this
2 forum but in others. And, you know, whenever we
3 reach out to them and get that put on the agenda,
4 you know, an item like this, they really
5 appreciate it. And they have insights, and they
6 are plugged into the local communities and the
7 CBOs that actually work locally, and those are
8 going to be critical, along with the developers,
9 as well, to make something big out of this
10 initial effort.

11 And then I wanted to actually build on
12 the question right after the prior presentation
13 about utilizing the HERS softwares to possibly do
14 the savings calculations. So without coming down
15 on whether, you know, I think that's a good idea
16 or not, I want to just suggest that anything we
17 can do to get compliance efforts done within the
18 workflow of projects is going to be -- you know,
19 is going to lower costs for everybody, lower
20 transaction costs, make it easier to apply if we
21 can sort of, you know, make compliance or, you
22 know, application to this program, just in the
23 regular workflow as much as possible so that it's
24 not an added burden.

25 So I want to just suggest to the

1 stakeholders and everybody on the phone, you
2 know, think about that, particularly those that
3 are in the low-income housing community, and get
4 the delicate financing structures that are needed
5 to get these projects done, that you sort of, you
6 know, look in your bag of tricks, you know, along
7 the way. Like what's the project flow?. All the
8 different steps, all the different criteria that
9 have to be met along the way when a project --
10 (clears throat) excuse me -- is being formulated
11 and see how we can leverage that process without
12 adding new requirements to, you know, check the
13 right boxes for the program, make sure the
14 statute is being complied with, but do it in a
15 way that's organic and integral to the process.

16 MR. SCAVO: Thank you so much for that,
17 Commissioner McAllister.

18 MS. CHAC: Hey, Jordan, there's a hand
19 raised from Srinidhi Kumar.

20 Srinidhi, you should be able to un-mute
21 yourself now.

22 MS. KUMAR: Hi. I just had a question
23 about why the CEC is drafting the outreach plan
24 without having an outreach expert or a technical
25 assistance provider onboard?

1 MR. SCAVO: I think that's something
2 we're thinking about now. So we mentioned that
3 we're debating whether to include outreach as
4 part of the scope of activities from a technical
5 assistance provider, but these are issues we
6 haven't, you know, fully baked yet. We're
7 considering a variety of options but I appreciate
8 the comment. Thank you.

9 MS. KUMAR: Yeah. I wanted to highlight
10 was Merrian said. I think there are two reasons
11 why it's really important that these properties
12 get targeted at the onsite.

13 So one is they pay a lot for the -- most
14 affordable housing providers pay a lot for the
15 designers they higher. And a lot of designers
16 and engineers, and Merrian pointed out, don't
17 have expertise in all-electric construction, so
18 it is important that this outreach happens early
19 on. And those contacts are available and readily
20 available. And, also, the technical assistance
21 provider is able to get in when the project
22 starts so they are able to coordinate between the
23 CEC, maybe even the local city agency that has
24 the (indiscernible) that's eventually going all-
25 electric and coordinating with the design staff

1 within the property construction site.

2 I just want to highlight how important
3 both the outreach and the role of the technical
4 assistance provider is and how it will be
5 important to input them when we are planning the
6 outreach plan.

7 MR. SCAVO: Thanks so much for that
8 perspective. That's very helpful.

9 I think Natalie Lee, the Director for
10 Renewables Division at the Energy Commission,
11 would like to speak.

12 Natalie?

13 MS. LEE: I just wanted, really quickly,
14 to address that last comment because we certainly
15 do recognize the importance of public input and
16 our outreach and technical assistance provider
17 roles.

18 I just wanted to mention that, largely,
19 why we're moving forward at this pace is a
20 requirement of the decision, of the CPUC
21 decision, for the timing. And as Jordan spoke
22 to, we are awaiting budget authorization for us
23 to be able to implement certain elements of this
24 program, including bringing an outreach and
25 technical assistance provider onboard.

1 So right now, moving forward, is largely
2 just a timing requirement, but it doesn't
3 minimize our absolute intent to hear that input
4 from an outreach consultant in the final program
5 design and as we move forward, beyond the
6 Implementation Plan.

7 MR. SCAVO: Sorry, Natalie, I lost a
8 little bit of that audio. Was there -- was that
9 a question or just a comment at the end there?

10 MS. LEE: No, that was just -- I just
11 wanted to speak to that last question and comment
12 we received.

13 MR. SCAVO: Okay. Thanks so much.

14 Do we have any other questions or
15 comments?

16 MS. CHAC: No other raised hands and none
17 from Q&A.

18 MR. SCAVO: Okay. We're still well ahead
19 on the schedule, so let's proceed to the last
20 presentation, which is a pretty short one, like
21 my one was.

22 Abhi, are you ready to present?

23 MS. WADHWA: Can you here me?

24 MR. SCAVO: I can.

25 MS. WADHWA: Okay. Great. Good morning

1 everyone. My name is Abhi Wadhwa. I'm with
2 California Public Utilities Commission. And I am
3 the BUILD Project Lead from the CPUC side. So my
4 slides will be very minimal. And I just wanted
5 to give you an overview of how we are thinking of
6 evaluating the 1477 programs. For this workshop,
7 I'm going to focus on BUILD, but just generally
8 give you an overview of timing and what the
9 decision lays out for evaluation, and spitball
10 some ideas with you regarding how we should be
11 thinking about this.

12 Next slide please.

13 So the decision, after a lot of good
14 input from our stakeholders, decided that it's
15 best to have a single evaluator for both TECH and
16 BUILD, both for program simplicity and ease of
17 coordination. There's a combined \$5 million
18 budget over the duration of both programs, \$2
19 million out of that comes from the BUILD budget
20 and \$3 million from the TECH budget.

21 The way it would work contractually is
22 that CPUC would be leaning on SCE as the
23 contracting agent. That means SCE will be the
24 one doing the request for proposal for the
25 evaluator with CPUC oversight. And what we do

1 ask in the decision is that the data collection
2 be coordinated between the TECH implementor and
3 the program administrator for BUILD, which is
4 CEC. So there is already an emphasis in the
5 decision that there should be some seamlessness
6 and some best practices to be followed with
7 regard to how program design works, along with
8 evaluation.

9 The decision, as Tiffany pointed out in a
10 previous slide, also requires that the evaluator
11 look at the bill savings tool or methodology,
12 wherever that lands, and recommend changes, if
13 any are needed.

14 Next slide please.

15 Some of the recommendations we would have
16 for the evaluator and that we would stress in the
17 RFP process is to follow best practices for
18 market transformation initiatives. We are very
19 cognizant that 1477 is envisioned as a market
20 transformation program and has a longer-term
21 goal, longer-term vision than just these pilots,
22 so what are those best practices, looking at some
23 of -- you know, outside of California, examples
24 like NEEA, and using those approaches as we get
25 into the evaluation framework?

1 Some of these means that you have to work
2 hand in hand with the program designer so that
3 the evaluator is designing their metrics logic
4 model and program goals to be completely in line
5 with what the program designer may have thought
6 of and vice versa. Sometimes the evaluator can
7 feed into the program design. And we want to
8 make sure that relationship is established and
9 prioritized from the get-go.

10 The evaluator would also be in charge of
11 establishing program baselines. And one of the
12 things, again, the decision emphasizes is to use
13 embedded measurement and evaluation approaches
14 within the programs. Learning from our lessons
15 in EE, we understand that the better embedded
16 these approaches are the sooner programs are able
17 to react to any changes that may be needed for
18 improvement.

19 We also recommend, of course, that the
20 evaluator propose any program design
21 modifications and, again, just be as robust and
22 real-time feedback as possible, as opposed to,
23 you know, longer two-year or three-year type of
24 cycles.

25 Next slide please.

1 So far as the program metrics go, there
2 are three metrics that are required by statute.
3 So either way, these are definitely top of our
4 list to track the number of low-emission systems
5 installed in each building type, projected
6 utility bill savings, and the cost per metric ton
7 of avoided GHG emissions. So that's just right
8 off the bat from the statute. That is something
9 that the evaluator absolutely has to track. And
10 both the TECH implementor and CEC are aware and
11 would be at least basing the code program around
12 these.

13 In addition to that, we just wanted to
14 brainstorm some ideas with you at the workshop
15 today. As Michael Colvin mentioned earlier,
16 program metrics help us kind of quantify what are
17 the program goals? And so we wanted to invite
18 your feedback on what do you think these metrics
19 should be? We are only presenting a few sketch
20 ideas here but look forward to hearing more from
21 you in the comments.

22 Next slide please.

23 So, for example, the total avoided GHG
24 emissions, perhaps that is a pretty straight
25 deviation of the statutory metrics that have been

1 provided. Probably a good idea to track based on
2 the natural gas hookups being clipped, how much
3 do we think we would be saving in emissions
4 because of this program effort?

5 Another one could be -- and, again, maybe
6 this is a bad idea but we want to hear from you.
7 Do you think it's important to track the number
8 of new technologies funded?

9 Is it important to us that it's not just
10 about all-electric, but we are trying to also
11 push the market for heat pump dryers and
12 induction stoves because that's now, you know,
13 new technology, other than just space and water
14 heating, or is that not important to us? Is this
15 first two years not the time period where we
16 should be counting that, counting the number of
17 new technologies we are promoting in the market?

18 Another one could be the number of low-
19 income electric -- all-electric projects funded.
20 So if, say, for example, 8,000 total units get
21 constructed in a year, which accounts to, and I'm
22 just making up numbers here, if it accounts to
23 400 projects in a year, do we -- is our metric
24 that 60 percent of those or 70 percent of those
25 should be all-electric from the time the project

1 gets launched? Is that an important metric for
2 us?

3 So in line with that, we appreciate your
4 feedback and how you feel the program should be
5 shaped around these metrics.

6 And that's it from me.

7 MR. SCAVO: Thank you, Abhi.

8 Do we have any comments or questions?

9 MS. CHAC: No raised hands at the moment.
10 Oh, we have one raised hand from Nick Young.

11 Nick, you should be able un-mute yourself
12 now.

13 MR. YOUNG: Hi. Just on the metrics, I
14 think it would be good to track the number of
15 low-income units served by low-GWP systems, so
16 served by low-GWP water heating systems or served
17 by low-GWP heating systems, or vice versa. That
18 could sort of neutralize the -- like if you have
19 a central plant, is that just one piece of
20 equipment, versus a water heater in every
21 apartment? Would that be like 50 pieces of
22 equipment? Whereas, really, what's important is
23 the number of homes that are served by this low-
24 GWP equipment.

25 MS. WADHWA: Great. Thank you, Nick.

1 That's a great comment. Please also leave it in
2 your written comments. Appreciate it.

3 MR. SCAVO: Are there other raised hands?

4 MS. CHAC: No other raised hands at the
5 moment.

6 MR. SCAVO: Is there anyone on the phone
7 who would like to raise their hand to speak?

8 Okay.

9 We have a question in the Q&A. Its from
10 Scott Blunk, that's S-C-O-T-T B-L-U-N-K. They've
11 commented that, "The number of people served may
12 also be a good metric to track, using bedrooms as
13 a proxy."

14 Thank you for that comment, Scott.

15 Are there any other comments or
16 questions? Okay.

17 We're close to the end of the workshop.
18 Are there any general comments or questions?

19 MS. CHAC: We have a question from
20 Michael Colvin.

21 Michael, you should be able to un-mute
22 yourself now.

23 MR. COLVIN: Thank you again so much for
24 organizing a really important day for this BUILD
25 Program.

1 I guess my overall comment is to go back,
2 is to take a step back and say, what is it that
3 we're trying to accomplish with the next four
4 years in this pot of money? And is it to get a
5 certain number of units built? Is it to get a
6 certain number of decarbonized units built that
7 are more cost effective than before? Is it to
8 help get lessons learned within the developer
9 community?

10 You know, I have to admit that I am very
11 concerned, from what I've heard today, that we
12 are going to overengineer this problem and we are
13 going to spend too much time on modeling and too
14 much time on doing some false precision of, well,
15 what would this have been in this modeling, in
16 this database, and in this effort?

17 And I think we need to, especially in the
18 economic situation that we're in right now where
19 new construction is going to be very difficult
20 regardless, we have to start framing the question
21 of how do we actually, you know, remove as many
22 barriers as possible to getting all-electric and
23 decarbonized homes available, you know, and get
24 that building stock out into, you know, out
25 there? And if we can focus on that as our

1 primary objective, then I think some of the
2 program design elements that we've bumped up
3 against today will then be put into the proper
4 context.

5 MR. SCAVO: Thank you so much for that
6 comment. And that's, you know, something we're
7 grappling with. I would recommend reading the
8 CPUC decision that interprets and builds on SB
9 1477 because we have put some thought into this
10 and that may help shape any written comments you
11 want to submit. But, again, thank you for the
12 comment.

13 We have another raised hand.

14 Ariel, would you -- or, I mean, Erica,
15 would you please tee that up?

16 MS. CHAC: Yeah. This one's from Peter
17 Turnbull, T-U-R-N-B-U-L-L.

18 Peter, you should be able to un-mute
19 yourself now.

20 MR. TURNBULL: Okay. Thanks for taking
21 my question. Excuse me.

22 I'm just looking at some housing stats.
23 And it looks to me that there's around 50,000
24 multifamily units started per year, this -- in
25 recent years. About the same number of single-

1 family units. Over the next four years, that's,
2 I guess, 200,000 of each. And maybe a third of
3 those, something like that, would be low-income,
4 which would be \$60,000 or \$70,000.

5 Do you guys have an estimate of how many
6 units you're going to serve with this program?

7 And then maybe the other part of my
8 question/comment is over the next four years,
9 that's, you know, about 16 or 18 percent of the
10 time between now and 2045, which is when the
11 goals are really -- well, have been stated.

12 So in terms of scale, how much of this
13 are you going to impact?

14 MR. SCAVO: I think that's a good
15 question. It's not one that we've refined our
16 analysis sufficiently to answer at this point but
17 it's something we are definitely keeping in the
18 backs of our minds.

19 Tiffany or Geoff, if you've got more to
20 say on this, feel free to do so. Okay. I think
21 this is one that is definitely useful feedback.
22 It's something we're considering but we haven't
23 drilled down to that level of specificity as
24 we're --

25 MR. TURNBULL: Well, just with all

1 respect here, I think that it's pretty important
2 for you to have a quantitative picture of what
3 will be accomplished here. And is that making
4 any kind of a dent in getting these buildings to
5 full electric?

6 MR. SCAVO: Yeah. Sorry. I didn't mean
7 to imply that I'm pushing back on the suggestion.
8 I think it's --

9 MR. TURNBULL: Okay.

10 MR. SCAVO: -- well, we need to do that,
11 we just haven't gotten there yet. We're kind of
12 framing some conceptual approaches to the program
13 but we haven't refined out analysis sufficiently
14 to drill down on how many we're targeting yet,
15 but we will.

16 MR. TURNBULL: Okay. Thank you.

17 MR. SCAVO: Thank you.

18 MS. WADHWA: This is Abhi, Jordan. If
19 you don't mind, I'd like to react to that last
20 question?

21 I think, in just looking at the dollars
22 and cents here on the table, at least from our
23 perspective as CPUC Staff, we don't have any
24 disillusionments that we'll be able to capture, you
25 know, 100 percent of the market. I think in our

1 thinking and writing the decision, our biggest
2 concern or vision, so to speak, has been that the
3 initial barriers, and even the lack of awareness
4 that builders may have in the marketplace
5 currently, needs to be removed and to get that
6 snowball effect started.

7 As Commissioner McAllister mentioned in
8 his opening remarks, you know, if we show those
9 incremental successes now, there may be a better
10 opportunity for us to seek additional funding
11 from the legislature as we try to scale this up
12 to the 2045 goals. But so far as the pilots
13 themselves go, I think there is a general
14 understanding that the technical assistance and
15 removing the barriers for builders, and on the
16 other hand, using TECH to make the case for these
17 products being viable as much as they are, you
18 know, more GHG-intensive counterparts, is
19 probably the core goal.

20 MR. SCAVO: Thank you, Abhi.

21 MS. CHAC: We have another question from
22 Merrian.

23 Merrian, you should be able to un-mute
24 yourself now.

25 MS. BORGESON: Hi. I just wanted to make

1 a comment. And Abhi's comments just now I think
2 are spot on. I do think that especially the low-
3 income housing market is sort of on the cusp of
4 being ready to do those themselves going forward
5 and they sort of need that initial push and
6 support. And, you know, they need to have that
7 experience with a new way of building, at least
8 for some of the systems in their buildings.

9 Another metric that will be important to
10 look at was sort of hinted at by Peter, as well,
11 that when you look back and see what percentage
12 of those 50,000 units a year, or at least the
13 low-income portion of those 50,000 units were
14 all-electric versus going forward, that will be a
15 really important metric, just in terms of are you
16 transforming the market? Is there experience out
17 there? Are we starting to create demand for both
18 the central and unitary hot water systems, for
19 example, that go in those buildings?

20 But another really important metric
21 that's a bit different, and I think this
22 distinction is really important, is which of the
23 developers that have never built all-electric
24 before, or maybe have one building, are now
25 trying it or doing it more regularly?

1 So there's both volume, but you don't
2 want just three top developers to have all the
3 volume; right? You want to also look at how many
4 new developers? How many developers are trying
5 this for the first time or are in the first few
6 years of trying all-electric?

7 What we've heard, just a little bit in
8 our initial conversations, and again, NRDC is not
9 a leader in affordable housing, there are so many
10 other organizations that have deep experience in
11 this, but just from the initial conversations
12 we've had is that doing this the first time is
13 hard or complicated, just because you're asking
14 your mechanical engineers and others to do
15 different things. So it will be really important
16 to think about, especially, how you target the
17 technical assistance to folks who are doing this
18 newly that need support for those first few
19 projects.

20 And I think then, if you look at the
21 metrics of both total units that were likely
22 going to be mixed fuel and now are all-electric,
23 and then also the numbers of developers who are
24 trying projects for the first time, those will be
25 really important metrics for market

1 transformation. And I believe many developers,
2 at least, are looking forward. And they sort of
3 see this as the future; right?

4 So it's going to be self-sustaining.
5 Once they try it, they like it, they experience
6 it, they realize that it's the same or lower
7 cost, the same or lower bills, which is what some
8 of the initial folks have found.

9 So I think using both those metrics and
10 thinking about it, really, as Abhi, I think, and
11 a few others mentioned, as a market
12 transformation piece around, essentially, you
13 know, spurring this market to get ready for the
14 future that many of them already see is where the
15 state's going.

16 So thanks to everyone for this workshop
17 today. It's been really helpful.

18 MR. SCAVO: Great. Thank you, Merrian.

19 MS. CHAC: We have another comment from
20 Nick Young.

21 Nick Young, you should be able to un-mute
22 yourself now. Sorry. Now you should.

23 MR. YOUNG: Hi. This is Nick Young with
24 AEA.

25 Just building off of Merrian's comment,

1 this is, like she said and like others have said
2 and sort of built into the program, this is for
3 market transformation. And the market we're --
4 maybe think about the like components of the
5 market that we're transforming. We're -- we want
6 to transform the market for, in many ways, how
7 these projects are designed. So the design teams
8 are a critical -- like they're the ones who are
9 designing it, and it is based off of their
10 designs that the projects pencil as cost
11 effective or not or financeable or not.

12 And so tracking, sort of to Merrian's
13 point, the developers who are doing this for the
14 first time, but I think also architects who are
15 involved in all-electric projects, and plumbing
16 engineers, so the actual design engineers, you
17 know, mechanical engineers on the heating and
18 cooling side, plumbing engineers on the water
19 heating side, so you can really track like who is
20 -- who are the design firms?

21 Because, ultimately, when an affordable
22 housing developer is developing a project,
23 they're not the ones designing their hot water
24 system. They ask for a hot water system, they
25 may have design guidelines, but it's ultimately

1 their consultants who design the systems. And so
2 making sure that this sort of tracking which
3 consultants that are working in this space in
4 California, are involved and participating in
5 this program, will be really important.

6 MR. SCAVO: Thank you for that comment,
7 Nick.

8 Do we have any other raised hands?

9 MS. CHAC: No more raised hands.

10 MR. SCAVO: And how about our
11 participants on the phone, would anyone like to
12 raise their hand there?

13 MS. CHAC: No raised hands on the phone
14 either.

15 Just as a reminder, folks on the phone,
16 you can raise your hand by pressing star nine.

17 MR. SCAVO: Thanks Erica.

18 MS. CHAC: Um-hmm.

19 MR. SCAVO: We do have some questions in
20 the Q&A window.

21 The first is from Scott Blunk, that's
22 S-C-O-T-T B-L-U-N-K. They've written, "I agree
23 with Michael Colvin. This is seeming to be a very
24 complex program. For the pilot, at least, the
25 only requirements should be no gas hookup to the

1 property and to be legally constructed and code
2 compliant. We have to get the ball rolling and a
3 simple program would help the most.”

4 Scott, thank you for your comment.
5 Simplicity and accessibility are important. And
6 we, I think, are trying to prioritize that as
7 much as we can while balancing other program
8 needs. But we definitely take that comment to
9 heart and are striving to make this as simple and
10 accessible as we can. Thank you.

11 Our next comment is a follow-up point
12 from Scott Blunk, that’s S-C-O-T-T B-L-U-N-K.
13 They’ve written, “This may become a central HPWH-
14 focused program because it focuses on low income
15 and low income focuses on multifamily, and in
16 multifamily, there is very little gas used
17 currently, except in water heating. Just
18 something to consider when designing the
19 program.”

20 Scott, thank you for that comment.

21 We have another comment from Srinidhi
22 Kumar, that’s S-R-I-N-I-D-H-I K-U-M-A-R. They’ve
23 written, “It would be great to track developers
24 for whom a BUILD-funded project is their first
25 all-electric building or for whom this is the

1 first time hearing about these technologies.

2 "Tracking first cost differentials would also
3 be great if there is -- if there are any, and
4 specifically" -- I'm sorry, let me start that
5 over. "Tracking first cost differentials will
6 also be great, if there are any. And
7 specifically seeing how BUILD helps reduce those
8 first costs will be helpful.

9 "First costs could also be related to
10 soft costs associated with building and all-
11 electric construction and may not just be about
12 the equipment costs.

13 "This is probably harder, but any
14 measurement around health, comfort, and safety
15 will also be helpful."

16 Thank you so much for that comment.
17 Those are good things for us to bear in mind.

18 Do we have any other comments? Okay.

19 Well, I thank everyone for the feedback
20 we've received so far and additional feedback
21 that we will receive during written comments.

22 At this point, I would like to invite
23 Chair Hochschild and our Commissioners in
24 attendance to provide closing remarks.

25 COMMISSIONER MCALLISTER: Hey, Justin

1 [sic], this is Andrew McAllister. I'll defer to
2 our -- I guess I'll take up the rear and defer to
3 our colleagues at the CPUC to start if they would
4 like.

5 COMMISSIONER RANDOLPH: This is
6 Commissioner Rechtschaffen. I don't have
7 anything specific to say. I very much appreciate
8 the comments. They raised a lot of good
9 questions that go to the core of what we're
10 trying to do, keep things workable, simple,
11 attract new participants, make it easy for people
12 meeting the statutory criteria. We will take
13 those -- all take -- take all of those and others
14 into account.

15 I very much appreciate the great
16 efficiency of the CEC Staff in presenting the
17 materials and getting us through so quickly. And
18 we look forward to continued collaboration with
19 you.

20 COMMISSIONER RANDOLPH: And this is
21 Commissioner Randolph from the PUC. I'll echo my
22 thanks to Staff for a great, organized, and
23 technically well run workshop.

24 I'm appreciative of the comments of all
25 of the stakeholders. And I understand that

1 simplicity is always a goal, but recognizing
2 that, you know, we do have a pretty specific
3 statutory program, so we need to make sure that
4 we follow all of the statutory framework as best
5 we can.

6 And I appreciated the discussion about
7 sort of the scope of the program. I think we all
8 recognize that these two BUILD and TECH Programs
9 alone aren't going to get us where we need to be
10 but they will provide a jumpstart and provide an
11 opportunity for learning what the best ways to
12 make builders aware of these opportunities and
13 technologies and potential savings.

14 So thank you everyone for all of your
15 comments and thoughts. And I look forward to the
16 written comments as well.

17 Thanks.

18 COMMISSIONER MCALLISTER: I'm wondering
19 if, Chair Hochschild, do you want to make any
20 final comments?

21 All right, well, I'll just, I'll wrap up
22 as well.

23 So, yeah, thanks. It's a rare workshop
24 where we actually are significantly early, so I
25 think everybody gets some free time on their

1 schedule that they didn't anticipate, which is
2 good. But thanks for all of the stakeholder
3 comments.

4 And I want to also acknowledge, well,
5 acknowledge Staff, first of all, Jordan and the
6 whole team, Geoff and Abhi, Eric, Tiffany, across
7 both Commissions. Thanks for organizing a great
8 day.

9 And, you know, I think the balance we
10 have to find is -- it's going to have some tough
11 issues to work through because we do have -- you
12 know, if you look at the PUC decision, look at
13 the statute, there are some requirements. I
14 agree with, generally, the tenor that we want to,
15 you know, not overengineer the program if we can
16 avoid it, make it easy to participate, and find a
17 right balance, you know, the sort of program
18 expediency, easy to apply, but also keeping the
19 statute in mind.

20 And also focusing on, you know, the long
21 term, we're talking -- I think there's some tough
22 issues to work through in terms of what does it
23 take to -- you know, if we want to get on early
24 into a given project, you know, I think the
25 comments were right spot on, that at the design

1 phase is the time you need to really build this
2 stuff in and potentially even, you know, provide
3 some up-front rebate, as Sean Armstrong said.
4 But then that's a whole project cycle that takes
5 three to four years or more to develop the
6 project.

7 And so we want to push the marketplace as
8 quickly as possible. As Peter Turnbull said, you
9 know, there's urgency and we want to acknowledge
10 that as well. So we need to find that balance
11 and really try to move the market in a very
12 intentional way with this program. And,
13 hopefully, build on a little more resources down
14 the road but, certainly, we've got to focus on
15 low income and bring as many resources to that as
16 we can in this and other arenas.

17 So I really think this is an area where
18 learning by doing is going to solve a lot of the
19 market barriers and that's what market
20 transformation is all about. So that back and
21 forth that we're having today and, hopefully, the
22 iteration can be really quick with, you know,
23 fast interaction between stakeholders, Commission
24 Staff, CPUC, and really getting the process moved
25 forward and the program guidelines and opening

1 doors for business to work directly with the
2 marketplace and provide those incentives.

3 So I'm looking forward to continuing this
4 process. And thanks a lot, everybody, again, for
5 your attention.

6 MR. SCAVO: Thanks so much for those
7 concluding remarks, Commissioners Rechtschaffen,
8 Randolph, and McAllister.

9 I have a few last pieces of business to
10 cover and then we will close the workshop. I'll
11 reiterate our next steps before we wrap today.

12 Public comments are due on June 29th. We
13 will submit the Implementation Plan to CPUC on
14 July 24th. And at that point we'll open up a
15 two-week public comment period for folks to
16 provide feedback on the Implementation Plan.
17 Based on that feedback, we may issue an addendum
18 that addresses or incorporates stakeholder
19 perspectives. And that would be August 2020,
20 maybe September 2020.

21 Upon receiving budgetary approval, we
22 will issue an RFP for a third-party technical
23 assistance provider in the third quarter of 2020.
24 We'll publish draft program guidelines in the
25 final quarter of 2020 and final guidelines in the

1 first quarter of 2021. And we plan to begin
2 accepting and processing applications under the
3 BUILD Program on or before July 1st of 2021.

4 As I said, the public comments on this
5 workshop are due on June 29th. This slide
6 provides a link to submit them through the e-
7 commenting system. You can also find additional
8 information on our program webpage. And I
9 provided contact information for myself and for
10 Abhi at the CPUC.

11 And this concludes the workshop. I want
12 to thank our Commissioners who joined us today.
13 And I want to thank all of the participants for
14 the comments and the feedback that we received.

15 I'd also like to thank our colleagues at
16 CPUC for joining us and for their assistance in
17 developing this workshop.

18 Stay safe out there and thank you for
19 helping California pursue its clean energy and
20 low-income housing goals.

21 (The workshop concluded at 11:25 a.m.)

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CERTIFICATE OF REPORTER

I do hereby certify that the testimony in the foregoing hearing was taken at the time and place therein stated; that the testimony of said witnesses were reported by me, a certified electronic court reporter and a disinterested person, and was under my supervision thereafter transcribed into typewriting.

And I further certify that I am not of counsel or attorney for either or any of the parties to said hearing nor in any way interested in the outcome of the cause named in said caption.

IN WITNESS WHEREOF, I have hereunto set my hand this 30th day of June, 2020.



MARTHA L. NELSON, CERT**367

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I do hereby certify that the testimony in the foregoing hearing was taken at the time and place therein stated; that the testimony of said witnesses were transcribed by me, a certified transcriber and a disinterested person, and was under my supervision thereafter transcribed into typewriting.

And I further certify that I am not of counsel or attorney for either or any of the parties to said hearing nor in any way interested in the outcome of the cause named in said caption.

I certify that the foregoing is a correct transcript, to the best of my ability, from the electronic sound recording of the proceedings in the above-entitled matter.



June 30, 2020

MARTHA L. NELSON, CERT**367