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STAFF WORKSHOP

BEFORE THE

CALIFORNIA ENERGY COMMISSION

In the Matter of:	)	
	)	
STAFF WORKSHOP ON DRAFT	)	Docket No: 20-DECARB-01
GUIDELINES FOR THE BUILDING	)	
INITIATIVE FOR LOW-EMISSION	)	
DEVELOPMENT (BUILD) PROGRAM	)	
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STAFF WORKSHOP ON

DRAFT GUIDELINES FOR THE BUILDING INITATIVE FOR LOW-EMISSION DEVELOPMENT (BUILD) PROGRAM

REMOTE ACCESS WITH ZOOM

MONDAY, DECEMBER 6, 2021

1:00 P.M.

Reported by:
Elise Hicks

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Nehemiah Stone
Anna McMaster
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P R O C E E D I N G S

DECEMBER 6, 2021 1:00 p.m.

MS. CARRILLO: Good afternoon, my name is Deana Carrillo, and I'm a program manager over at the Local Assistance and Financing Office at the California Energy Commission. It's my pleasure to welcome you to the Draft Guidelines Workshop for the Building Initiative for Low-Emission Development Program, commonly known as BUILD.

The program will provide technical assistance and incentives to encourage new all-electric low-income housing in gas corporation territories. And I will be joined by several team members today who will be introduced along the way.

Next slide, please.

We're excited to be here this morning to discuss the draft guidelines for the BUILD program, which will reflect our consideration of public input on the preliminary program design in our earlier stakeholder engagement. They were posted to the docket on December 1st, and we're requesting public comments by December 15th.

The program has a third-party evaluator, Opinion Dynamics, which has joined us today with Abhilasha Wadhwa from the CPUC, and also provided a proposal that was submitted to the docket on December 3rd. We're requesting

public comments on this proposal as well, as elements of it may ultimately be included in the final guidelines.

I'd like to thank you very much for your engagement in this process. To date, we've provided broad concepts on program design. And now that we're proposing specific language, your continued feedback is even more important to ensure the guidelines can accommodate any industry constraints.

This slide outlines our agenda today. We'll start with a welcome from Commissioner McAllister; then provide a brief overview of the program for those new to the conversation; and then discuss the Proposed Eligibility Requirements; the Technical Assistance, and our New Adopter Award for new market entrants; Incentive Structure; Program Participation; Evaluation, Measurement and Verification; Public -- and then open for the general public comment and talk about next steps.

Next slide, please.

Before we launch into the agenda, I'd like to recognize Commissioner McAllister who will provide us with some opening remarks.

Commissioner?

COMMISSIONER MCALLISTER: Hey Deana, thank you very much.

I'm really happy to be here. Wow, boy, it's

really exciting to be at this juncture and being close to rolling out this program which I have to say in the pantheon of programs that we have to really achieve market transformation and move toward the decarbonized building future that we all know we need to achieve, this program is and has the potential to be even greater. Sort of a keystone program for the state. And I would say it's also a great example of collaboration between the Energy Commission and the Public Utilities Commission to achieve these long-term goals and market transformation really moving our building sector to the technologies of the future.

So, I'm very, very excited to be here. This guideline's process has already had a lot of opportunities for input, and really want to thank all the stakeholders that are on today and have been participating over the past months on helping us craft guidelines that are both faithful to the statute but also help us pragmatically move the marketplace and help facilitate the transformation that we know we need to see with this program.

I want to thank Deana, for your leadership and your amazing facilitation throughout this process. Natalie as well that I see is on this call as well, the Deputy Director for Renewables. All the whole team that have helped craft this program. And that is really in three

different divisions at the Energy Commission, the Renewables Division, where the Local Assistance and Finance Office sits. The Efficiency Division for much of the technical work and also Legal, who have also helped us manage that content of the program. That all three of those of teams that are really, you know, the whole village, thereof, have been really engaged throughout the process.

So today's guideline's presentation is the fruit of all that labor along with all of the interactions that we've had with all the stakeholders. So good to be at this juncture.

I wanted to just thank a few other folks: Abhilasha Wadhwa is on from PUC. She has been a really great partner throughout this, along with Nick Zanjani, as well as Commissioner Rechtschaffen and his advisors, Simi primarily, but his whole office. And so I've been really thankful for his leadership and partnership on this.

And then finally, my and the Chair's advisors here at the Energy Commission, particularly Bryan Early and Ken Rider, have been very engaged in this throughout.

So this has been a significant process I think by necessity because we are talking about moving markets that need a big push and, you know, it gets complicated and, you know, the statute has certain requirements in it and we

also want to be just very eyes wide open, very intentional about how we inside in that marketplace. And so I think, you know, assisting new electric multifamily construction, affordable primarily, is something that the State needs for many, many reasons. So, obviously, it needs to help us achieve our climate goals, but we also have just a desperate need for additional housing and particularly affordable housing in the state. And so we want to sort of lock arms with the housing agencies and all the different collaborators across the state, local, and regional as well as statewide to make sure that this sort of enterprise of solving both our housing and our climate crisis can be firing on all cylinders. And so this program is a really key, sort of link in that chain.

So I want to just congratulate everybody getting here today. We're not quite there yet, we're -- we need to vet and improve and tweak the guidelines in response to feedback we'll get today. Very much encourage people to chime in as well as written comments after today.

But with that, I want to pass it back to Deana and really thank everyone for their attention and really looking forward to today's workshop.

So Deana, back to you. Take it away.

MS. CARRILLO: Thank you, Commissioner McAllister, we are so appreciative of you taking the time

out of the day in your leadership in this area.

Next slide, please.

Before we get started, we've got some virtual housekeeping. This webinar is being conducted remotely and is being recorded. We'll be highlighting key issues in the draft guidelines, but this presentation is not comprehensive. So as we've mentioned, please pick a time to review the text in the draft guidelines as well as the EM&V proposal that was presented and noticed on Friday.

We'll have breaks in the presentation for questions and comments. There will be three ways to comment today. You can use the raised hand feature in Zoom. Over the telephone, you can dial star 9 to raise your hand, and star 6 to mute and unmute. And you can type your question in the Q&A window. We are not actively using the chat so please again, type your question into the Q&A window.

If your question will be addressed in a future section, we may hold it off until then. And please limit your comments to three minutes per commenter or organization per topic. We expect the workshop to run for approximately one and a half to two hours. And, again, written comments are due December 15th at 5 p.m.

As Commissioner McAllister mentioned, our products and the program design is only as strong as the

stakeholders and the engagement in the comments that we get to make sure that we get it right. So please, I know that this is a bit of a process, but don't stop now, don't forget to submit your comments on December 15th.

Next slide, please.

And with that, I'm going to be introducing Camille Remy-Obad, she'll be moderating our next section.

MS. REMY-OBAD: Hi, Deana, thank you very much.

And I also want to take a moment to thank all of you who are participating today, and we very much appreciate your time. As Deana has indicated, we have been working hard in collaboration with many to bring these draft guidelines to fruition.

Next slide, please.

So, this is our BUILD path to today. The BUILD program was authorized by SB 1477 in 2018, authored by Senator Stern, which authorized two building decarbonization programs to encourage the development and deployment of near-zero emissions building technologies: the BUILD program, and also the Technology and Equipment for Clean Heating Initiative, or what we call TECH.

BUILD is a residential building decarbonization program that provides incentives and technical assistance to support the adoption of advanced building designs and near-zero emission technologies in new low-income

residential buildings.

In January of 2019, the CPUC initiated the new rulemaking on building decarbonization, and under this proceeding, the CPUC adopted Decision 20-03-027 in March of 2020, which established the framework and requirements for both programs authorized by the legislation. Through this process, the CEC was named as the administrator of the BUILD program, and the program was further targeted to all electric low-income residential housing, both multifamily and single family.

The CPUC approved the BUILD Implementation Plan on April 15, 2021, which provided information about the anticipated requirements for program participation and served as a framing document for developing proposed program guidelines. At a workshop on September 15th of this year, we introduced a preliminary program design for public comment that informs the development of these guidelines even further. And from here, staff is seeking feedback on the draft guidelines. Your feedback on the specific language will provide the necessary input we need to further refine the language of our proposed final guidelines for adoption.

We are anticipating bringing final guidelines to the Commission for consideration in February to be approved for submittal to the CEC for final adoption via a CPUC, or

the California Public Utilities, business letter.

Next slide, please.

This is just the BUILD program at a glance. The goal of BUILD is to deploy near-zero emission building technologies to reduce greenhouse gas emissions while ensuring that no negative bill impact to low-income -- while ensuring no negative bill impacts to low-income occupants. Eligible projects must be all electric, new construction located in a participating gas IOU territory. The total program funding is 80 million with at least 60 million for new low-income residential housing units. Other funding priorities include technical assistance, education, and outreach to promote all electric building construction.

Next slide, please.

The program funding must be allocated according to the Cap-and-Trade allowance for each gas corporation. The CEC has also targeted a significant portion of funding to technical assistance. Approximately six to eight million over the next four to six years, as we believe that technical assistance will be key to broader market adoption by walking housing developers and contractors though the various challenges of adopting new technologies and building approaches. We will talk more about this later in the presentation, as well as a new proposal, setting aside

1 million for New Adopter Design Awards.

Next slide, please.

And with that, we'll launch into the next section, Eligibility Requirements. These next few slides will review the program's eligibility requirements, and then we will pause for questions and comments.

Next slide, please.

The BUILD incentives are available for any public, nonprofit, or private developers with at least five years of experience of deed-restricted low-income housing development. The housing development must be all-electric, not mixed fuel, and demonstrate modeled resident utility cost savings, which we will dive into in the next few slides.

It is available to new residential buildings, as defined by the CPUC, located in the specific gas territories and also includes tribal areas. Projects that aren't eligible under the program: market rate residential buildings, homes that do not fall under Title 24 energy code will not be included in the pilots launch, although we may include it in the future. And also buildings without residents are not eligible.

Next slide, please.

As noted above, the CPUC decision focused the program to deed-restricted low-income residential housing.

This table shows the four types of eligible categories of income limits established in statute. For those that fall under Type 1 and Type 2, staff are proposing that we rely on the income limits established by the low-income housing funding source for the project. This would provide flexibility to easily align with the various affordability standards established by the Tax Credit Allocation Committee, the Debt Limit Allocation Committee, Department of Housing and Community Development, the Federal Department of Housing & Urban Development, as well as local affordable housing agency requirements.

Next slide, please.

Okay. So the Resident Utility Cost Savings. The authorizing statute requires that projects under the program do not result in higher utility bills for their low-income residents. Note that this is also a building-to-building comparison, not a review of any specific occupants' actual costs.

Next slide, please.

So as we go through this flow, what you'll notice is, to meet the statutory requirements the CPUC has developed a methodology[1] that compares each project's building design to a new mixed fuel prescriptive building

[1] Please note the presenter misspoke, the methodology was developed by the CEC not the CPUC.

as the baseline using the California Building Energy Code Compliance freeware and applying the applicable utility rates. CBECC, that's the soft -- the freeware is free energy analysis software used by the CEC for demonstrating compliance with the energy code. It considers building envelopes and mechanical system design and calculates energy usage of the building. By applying the estimated therms used by the building to natural gas utility rates, the natural gas bill can be calculated. Likewise, by applying the kilowatt hours to electric utility rates, the electric bill can be calculated. The total of these bill calculations equate to the modeled resident utility costs.

To meet modeled resident utility costs savings, the CEC evaluated current low-income resident utility rates for the largest utilities. We assumed time of use rates given their broad uptake. We are requiring savings in year one, not over the lifetime of the equipment, to better acknowledge short lengths of occupancy in some of these housing sectors. In response to public feedback on our approach in the proposed program design, we've shifted the water heating and laundry costs in mid- and high-rise structures from the tenants to the building owners to better reflect industry norms. And we've established a 5 percent over modeled bill neutrality to better ensure the resiliency of the model.

Under this methodology, calculations buried by building design, by climate zone, and by the rates of the utility combinations served by the project.

Next slide, please.

Applicants will design their projects to meet the modeled resident utility cost savings requirements with various efficiency and PV, solar benefits with various efficiency measures and PV, and the solar benefits must be assigned to the tenants. The CEC will be requesting the VNEM and solar assignment agreements to ensure the calculated thresholds are met.

Next slide, please.

Eligible applicants are limited to 3 million total for BUILD incentives, and the all-electric development and construction costs eligible for reimbursement are summarized in the slide and also within the draft guidelines.

Next slide, please.

And as the last slide in this section, the receipt of both incentives and technical assistance under this program will contribute to an entity's application of public works requirements including prevailing wage pursuant to the Labor Code 1720.

Next slide, please.

And that brings us to the questions and comments.

Please remember there are three ways, you can use your raised hand feature on Zoom, over the phone dial star 9 to raise your hand, and star 6 to mute or unmute your phone line. You can also type your question in the Q&A window.

Thank you.

MS. MILLS: Hi Camille, this is Susan, we have a question from a caller on the line.

Astrida Trupovnieks. I apologize if I mispronounced that name. I'm going to unmute you and you can unmute yourself.

MS. TRUPOVNIEKS: Hello. Yes, I'm Astrida Trupovnieks from the City of Lodi, Lodi Electric Utility.

I'm sorry if I missed it, but have you gone over the eligible applicants for the BUILD -- for the BUILD fund? So who are the eligible applicants?

MS. CARRILLO: The eligible applicants are defined more in the guidelines. So you should take a look at that deeper definition. And it includes the developers or owners of low-income residential housing that can be a for profit, nonprofit, or governmental entity.

MS. TRUPOVNIEKS: And how long will the funding cycle be open?

MS. CARRILLO: We'll get -- we'll go into that in a little more detail in a future slide, but there's $60 million available on a first-come, first-served basis, on a

rolling basis.

MS. TRUPOVNIEKS: Thank you.

MS. CARRILLO: And Astrida, I just want to make sure that you do have access to the guidelines which were posted and can be found on our website.

MS. TRUPOVNIEKS: You know, I have not yet, but I will look.

MS. CARRILLO: Okay. Perhaps Susan or Adrianna, if you could put that link to the guidelines and for the workshop page in our -- in the chat box.

MS. MILLS: Great. Thank you.

We do have another question from Nehemiah Stone on the line. I will unmute you, and you can unmute yourself. Mr. Stone?

MR. CARILLO: If you're on the phone, dial star 9 to raise your hand, or star 6 to mute or unmute.

MR. STONE: Can you hear me now?

MS. CARILLO: We can.

MR. STONE: Okay. I'm going to ask two questions. One, on Slide 10, you indicated that projects cannot be connected to the gas grid. What about propane? I'm assuming that they're not allowing propane hookups either, correct?

MS. CARRILLO: Correct. Not for the building envelope or the building -- not to heat or cool the

building.

MR. STONE: Okay. And the other question is, I think it was the Slide 13 said that $3 million is the maximum for an applicant. Now is that 3 million at the project level or 3 million for an applicant regardless of how many projects they bring you?

MS. CARRILLO: At the applicant level. So that would be a $3 million cap at the applicant level program-wide. And I would encourage everyone to look at the definition of eligible applicants which we borrowed or I should say leveraged from the universal regulations of the Department of Housing and Community Development on those that are actually responsible for the financing of the project. So that would be kind of a parent organization, not necessary each LLC that's established. So please take a look at that definition and that program cap per applicants to see how that may impact your future projects.

MR. STONE: Thank you.

MS. CARRILLO: Thank you, Nehemiah.

MS. MILLS: Great. We have one more question about modeling, but we'll wait till we get through that section first so we can come back to that.

MS. CARRILLO: Great. Thanks, Susan.

So thanks, Camille.

We're going to move forward to the next slide to

talk about technical assistance.

Next slide, please.

All right. So we're going to spend a few minutes talking about technical assistance and new adopters. One of my favorite subjects.

Next slide, please.

We're really excited about the technical assistance being provided under BUILD. And they will have a meaningful impact of market transformation. As Camille mentioned earlier, we set aside six to eight million dollars for a term of four to six to years to invest in technical assistance for developers and their design and building teams. I should note here that to be eligible, you do not have to have the five years of experience in California that you do for an incentive.

The Energy Commission issued a competitive solicitation and awarded the contract to the Association for Energy Affordability and its team on September 8th, 2021. And the contract is now effective, and over the past quarter we've focused on initial foundational activities under the contract.

Technical assistance will be prior -- will be available prior to the launch of the program, the application process will be outlined in a Technical Assistance Manual which is under development. And once

that's developed, a notice will go out to the public when the technical assistance is available.

Applicants will be provided unlimited hours of assistance for their first two projects and limited the next two projects to approximately 50 hours.

Next slide, please.

AEA and its team will make technical assistance available to all prospective applicants for BUILD. Their team includes: TRC, California Housing Partnership, Highlands Energy Services, David Baker Associates, Mithun, Integral Engineering, the Ortiz Group, and the Smith Group.

Service of the Technical Assistance Provider includes project design, helping to overcome technical challenges with new equipment, permit assistance and supporting local building departments as we work to get permitted through all-electric buildings, and supporting the developer/energy consultants, the architects, and engineers in demonstrating program and code compliance.

Next slide, please.

This is new to our program design, as a result of the public feedback we've received to help incent new adopters to all-electric development. We are proposing a New Adopter Design Award to further accelerate market transformation. We've received several comments from stakeholders advocating for early incentive funding,

maintaining it would have a stronger impact on early design decisions, as well as a deeper incentive for new market entrants to an all-electric development.

So to support these goals, we are proposing to establish a New Adopter Designer Award which has an initial program funding of $1 million under the program, available to reimburse up to $25,000 in direct design costs to new adopters that are developing a multifamily project of at least ten units or more.

Eligible applicants must provide proof of costs, apply for the reimbursement at the time of the incentive reservation, and will receive the award upon the approval of the incentive reservation, which we'll go over in a little more detail of that process.

Next slide, please.

Any questions on technical assistance and the new design -- the New Adopted Design Award?

Again, there's three ways to pose a question. You can raise your hand in Zoom. Over the telephone, dial star 9 to raise your hand and star 6 to mute or unmute. Or you can type your question into the Q&A window.

MS. MILLS: Thanks Deana, this is Susan.

So far there's no questions specific to TA written, and there are a couple of hands raised.

I'm going to go with Anna McMaster. Go ahead and

unmute yourself.

MS. MCMASTER: Hi. Thank you.

On one of the slides, there was a note that recipients of TA are going to be held to prevailing wage. If we have an affordable project that is not required to be prevailing wage by our funding sources, would that -- this would still trigger that requirement?

MS. CARRILLO: To do one -- I almost want to get -- have my --I have been, and this is out of my job experience, so you should direct your legal inquiries to your legal representatives on this one because prevailing wage can be tricky.

What I can share is that our program does trigger -- this counts as whether its technical assistance or whether its the incentives, does represent public funding, but should be accounted towards prevailing wage.

MS. MCMASTER: Okay.

MS. CARRILLO: So I'm sorry to have a non-answer answer, Anna. This project is -- I recognize that, but each project is going to be a little different and this is out of my expertise.

MS. MCMASTER: Okay. Great.

MS. CARRILLO: I'd take a look at the specific prevailing wage language in the guidelines and then connect with your legal counsel.

MS. MCMASTER: Okay. Thank you.

MS. CARRILLO: Yup. And again, please -- please submit your public comments.

MS. MILLS: David Freedman is -- has a hand raised.

I'm going to allow you talk. Unmute yourself please.

MR. FREEDMAN: Thank you. Good afternoon, David Freedman, Vice Chair of Palm Springs Sustainability Commission.

What's the timing – what's timing could the availability of the Technical Assistance Manual, and is there anything that eligible project developers can do before then, just to be ready for when that manual is available?

MS. CARRILLO: Yeah. Good question, David. We're working on actually reviewing it as we speak hoping to launch it before the end of the year. So I would keep your eye out for it. We will send out a notice.

And I think in the meantime, I would pull together your questions and needs so that you could have a strong conversation initially with AEA and their team. They're very excited too. So we're working on moving quickly. And to that end, I should say in an effort to get the program up and off, you know, off the ground with

technical assistance because it will be so meaningful, expect an iterative version of the Technical Assistance Manual, we'll probably start with a version one, in order to have a phased approach and then add some details to it as we go with version two or version three.

MR. FREEDMAN: Thank you.

MS. CARRILLO: Yeah. Thank you.

MS. MILLS: We have a written comment from Joy Silver. Is the Adopter Financial Award in addition to the capped program-wide 3 million?

MS. CARRILLO: Yes, it is. So to explain that one a little bit. There's a $3 million cap per applicant in incentives, but your Technical Assistance Award of 25,000 doesn't fall under that. But also, please note that you're only a new adopter once.

MS. MILLS: That's all the technical assistance I'm seeing at the moment.

MS. CARRILLO: Okay. Great. And if there's anyone who's interested in looking into more detail of the technical assistance and the services provided, our competitive RFP is still on the website, so you could take a deeper look at that there.

All right. Next slide, please.

Now we're going to get into the incentive structure and I'm introducing Erica Chac.

MS. CHAC: Thanks, Deana. Okay. So now we're going into the incentive structure.

Next slide, please.

So there are four types of incentives that make up the total incentive an applicant can receive under BUILD. The first is the base incentive, which is based on a greenhouse gas emissions emitted from mixed fuel building. We are maintaining the $150 per metric ton and believe that the value is appropriate at this time.

The second is a building efficiency incentive which is based on a percentage above code. This incentive maxes out at $1,000 per bedroom.

The third is an incentive for incremental PV above code that might be included to meet the modeled resident utility cost requirement. We are looking at $1.30 per watt for low rise and $3 per watt for mid- and high-rise.

The fourth is an optional kicker incentive for things like grid flex, battery, EV charging, and other technologies that we will go through soon. And this is a flat rate depending on the equipment.

So an eligible applicant would add all of these incentives together to get the total amount. And we have received comments to make a minimum incentive amount available in a simple format for communication purposes.

We are working on developing a matrix for that so builders will be able to easily assess their minimum incentive amount for each climate zone. And the minimum base incentives generally range around $1000 to 3000 per bedroom depending on your building type and climate zone.

Next slide, please.

The methodology we use to calculate the greenhouse gas incentives follow a similar path to the modeled resident utility costs savings methodology. We modeled a code compliant all-electric and mixed fuel building in CBECC, and then applied emission factors to the hourly energy usage. The emission factors we used are from the factors developed for the 2022 Time Dependent Valuation which is used in CBECC for residential.

Next slide, please.

So here is a list of our kicker incentives. The purpose of offering kicker incentives is to encourage the market for things such as; technologies that contribute to electrical grid stability, like grid flex and on-site energy storage; Low-emission technologies, such as heat pumps with low-GWP refrigerants; High efficiency appliances, such as induction cooktops and heat pump clothes dryers; And other things like EV chargers.

We do have different incentives between single family and multifamily chargers. In our last workshop, we

received feedback that it is generally more expensive to install chargers on multifamily than single family. And we also now are proposing incentive for smart EV chargers. More details on the requirements for these kicker incentives are outlined in the draft guidelines.

Next slide, please.

So this is an illustrative example of a low-rise project in Climate Zone 13, or Central Valley, with 48 units and 72 bedrooms. The modeled project uses split heat pumps that are a little above minimum requirements, central Sanden water heaters, and Title 24 prescriptive envelopes. The total greenhouse gas incentive is $146,000. There is a building efficiency incentive for almost 60,000. And this is based on a percentage above code that the model is at.

There is no incremental PV incentive because no additional PV above code is needed to meet the modeled resident utility bill savings requirement. However, the building will still require a set amount of PV to be allocated to the residents.

And then lastly, there is a kicker incentive for a low GWP refrigerant for the central heat pump water heater of 28,000. And this totals to almost $234,000 or about 3,200 per bedroom.

Next slide, please.

And here is the same project across two other

climate zones. Climate zone 3 in Bay Area would receive more money, and Climate Zone 10 in Southern California would receive slightly less. And this slide kind of demonstrates how the same type of building design will be evaluated in different climate zones due to their modeled building performance.

And next slide, too, please.

And now we will open up to any questions or comments on the incentive structure. And as a reminder, if you're over the telephone, you can dial star 9 to raise your hand and star 6 to mute and unmute your phone.

MS. MILLS: Great. We have one question from Tom White, Larry might answer this, so Erica I'll leave it to you to decide.

How will the model -- and this is from Tom White. How will the model incorporate added cooling costs from installing heat pumps in residential units where there's currently no active cooling installed?

MS. CARRILLO: Sounds like a question about a retrofit.

MS. LEE: Deana, can you expand on that answer?

MS. CARRILLO: Yeah. So retrofits are -- become, if we're correct, in that -- and the building currently doesn't have cooling and you're looking to install it, and it's eligible because it's a rehab that is over 50 percent.

We would just compare it to the -- our comparison baseline. And if we didn't answer that question correctly, then ask it again in the next section. We will go through a little bit on the modeling with some additional detail.

MS. MILLS: Thanks Deana. I'm not seeing any other questions coming through.

MS. CHAC: Thanks, Susan.

In that case, next slide, please.

I will pass it back to Deana to talk about the next topic.

MS. CARRILLO: Great. So let's talk about program participation. I've seen a few questions come in on the chat on when and how do we apply and what type of tools they may develop.

Next slide, please.

All right. So I should have said -- as I should have noted earlier in the presentation, if you've been with us along the way, some of these slides will look familiar. We are -- the program participation process is designed to recognize the funding and regulatory requirements of low-income housing development, and those unique challenges such developments face.

Broadly, there are three steps in the incentive process. Step one is the incentive reservation. After

working with the technical assistance provider as applicable, the applicant will have their initial building design developed to apply for an incentive reservation. The eligible applicant will provide the information outlined here, and in more detail in the guidelines, so please look at those. And upon review and approval by CEC staff, will receive an incentive reservation before receiving their construction financing for the project. The term of the reservation is 18 months to provide applicants time to obtain their construction financing. This is also the point when an applicant would apply for a new Adopter Design Award.

Step two, Construction Reservation. Once you've received your financing commitments, whether it's from the Department of Housing and Community Development, the Strategic Growth Council, or perhaps CTAC the approved applicant will return to the CEC and confirm any changes to their project, project eligibility and measures, and the corresponding incentive value will be calculated. Upon CEC staff confirmation of the continued eligibility and incentive value of the project, an applicant will have 36 months to construct the project. This period has been extended by 12 months from the preliminary program design in response to stakeholder comment. We've also established some progress payments along the way, so we've heard you.

And I'll outline that in a few slides.

And then at step three, at your project completion and incentive funding. Upon the approved applicant's completion of the project, the applicant will provide the appropriate documentation demonstrating construction, which the CEC will review and cause the remaining incentive payment to be issued. This approach provides flexibility, allows for modifications to the project through the long development timetable. And recognizing that things change, this project will be evaluated at each stage of the process to align the incentives with your design changes and any modifications to energy codes before you build your -- get your building permit. And as I mentioned, we've also added some progress payments which we'll highlight in a few slides.

Next slide, please.

This slide demonstrates some other elements of program participation and flexibility that we're building into, to accommodate the industry's complexity and encourage a portfolio approach.

First, to encourage developers to examine their whole portfolio for decarbonization opportunities and not just on a project-by-project basis, we are providing an ability to transfer awards within a developer's portfolio, assuming that funding is available in each ratepayer's

territory.

In addition, we're allowing a six-month extension upon a demonstration that the project financing can be received. We also recognize that some issues may arise outside of the approved applicant's control and are enabling a process to request an extension of the construction reservation for an additional 12 months. And any additional requests for time may be considered by the CEC at a business meeting.

Next slide, please.

Okay. Progress payments. The CEC staff has been working diligently with our legal office working on exploring how we can provide progress payments to improve the process for applicants and remain consistent with state funding requirements. BUILD incentives must reimburse applicants for accrued costs. And as we look at our incentive structure, we recognize that most of our GHG benefits are achieved when a developer chooses to build all-electric.

Recognizing that, we've found some flexibility as this slide shows. So the new Adopter Awards are applied for and released at the time of incentive reservation approval, when the new adopter has accrued those early design costs. We will be able to release up to 25 percent of the GHG portion of the total incentive at the time

the applicant moves forward in building an all-electric project.

So when you're approved at Stage 2, you would receive 25 percent of the GHG incentive. Subsequently, you would receive 50 percent of that same GHG incentive after the project's foundation has been poured and there's a demonstration of the commitment to an all-electric building.

And I should clarify here that it's up to 25 percent and up to 50 percent. And because, again, it has to go back to your actual accrued costs. The remaining incentive values will be released at project completion. Okay, it may look like we've added some complication here but we're working on making it simpler for you and really getting the funding in the hands of the developers when they need them or least when we're able to release funds as early as possible.

Next slide, please.

So this next slide gives a little example of that diagram. So again, this was the same example that Erica showed earlier on Mateo Valley Gardens, the low-rise building. You would get -- we are looking at just the GHG incentive -- that tight top line. An applicant will be able to receive about 36,000 or 25 percent at the construction reservation. An additional 50 percent, up to

that 50 percent award at 73,000, as once the foundation is poured. And the remaining at project completion and a demonstration that you've completed the project.

So that is an example of the progress payments for the incentive values.

Next slide, please.

I'd like to dig a little deeper into the incentive reservation process. And this slide will look familiar to some. But to provide potential applicants the ability to estimate the incentive value prior to undertaking building modeling, which can be expensive, we've provided two pathways to the incentive reservation process. Applicants may use our calculator or provide their building modeling that's consistent with CBECC.

Next slide, please.

My colleague, Larry Froess, is going to give a demonstration of the BUILD calculator as a demonstrative tool. We're still working on the back end that we'll be offering in the reservation stage. Also, again, we use this demonstration for illustrative purposes only. We're still working to incorporate some of our changes in our approach. Like the central hot water for mid- and high-rise. So I think -- low rise, so we're good.

With that, Larry, why don't you go ahead and walk through this one.

MR. FROESS: Okay. Thank you, Deana.

Yeah, this is going to be a demonstration with a BUILD calculator to show how it determines the incentive amounts.

The modeled results are based on a two-story, eight-unit, 12-bedroom apartment building that has a prescriptively compliant envelope, individual heat pump water heaters, and in-unit laundry appliances. Now the dollar amounts shown are for demonstration purposes only and is meant just to show how the changes to the building effects the incentive levels.

For the first example, we're going to pick a building that's in Riverside, which is Climate Zone 10. And it has minimally efficient features that just passes Title 24 as can be seen by the 1.2 percent in the percent better than Title 24 box.

Then the users can increase the efficiency as they go from left to right. So for this example, this is Climate Zone 10, the gas utility is located in Southern California Gas. The electric utility is Southern California Edison. We're going to go a minimal efficient heat pump, minimal efficient air condition, code compliant windows and walls and with a Tier 4 heat pump water heater. And the result of this is the modeled utility cost savings is at minus 49 percent, which means that the monthly

modeled resident utility cost difference is $13.90 more than the mixed fuel building.

So the way to close the gap in efficiency would be to either make the building more efficient through energy efficiency measures or some more incremental PV can be added to help make up that difference.

The BUILD calculator can automatically calculate how much PV is needed to reach the 5 percent property utility cost savings. For this example, it's going to need 4.93 kilowatts of additional PV and that will result in a model utility cost savings of 5 percent or savings of $1.42 per month versus the mixed fuel building.

So going across the incentives that this will get is 1.2 percent better that Title 24, it's going to save 4.47 metric tons of GHG per year. So the incentive amount for that is $150 per metric ton over 30 years of the life of the building, so about just over $21,000. Incremental PV is going to get $1.30 per watt and so that's 4.93 kilowatts, this places just over $6,400. And the high efficient building incentive, a building can qualify up to a $1,000 per bedroom. And the way that works is it's based on a sliding scale of the percent better than Title 24. So between zero and 10 percent can qualify between zero and $1,000 per bedroom. So if this was at 5 percent better than Title 24, then it could qualify up to $500 per

bedroom. All this adds up to almost $28,000 of incentive for the entire building or just about $2,300 per bedroom.

So now I'm going to make this building more efficient, the example. So we're going to go with a high efficient heat pump, we're going to go with a high efficient air conditioner, go with some better windows, and we'll leave it with that. And so you can see that the modeled utility cost savings went down to minus 42 percent and $11.77 more than the mixed fuel.

The incremental PV because of that went down so only 4.24 kW. And then you can see that the Title 24 went over 10 percent. So it's also saving a little bit more GHG per year. So it's doing the calculations for the incentive is just over $20,000 for the greenhouse gas, PV is 5,500 and it's qualifying for the full $1,000 per bedroom, or $12,000. So we can get just about $37,000 for the entire building, which is $10,000 more than the minimally efficient building.

Also, I want to note too that the incremental PV for the BUILD program, the incremental PV and any code required PV is required to benefit the tenants directly. And then anything installed above that requirement can benefit the owner.

The next example I will -- want to change it back to minimal compliant, and we'll change it to Climate Zone

12, which will be Sacramento, just to see how it's different for different climates zones. And so that this would be a gas utility with PG&E, and the electric utility will be PG&E as well, minimum efficient features. This barely complies with Title 24 again, and the model utility cost savings is at minus 24 percent for this example, or $7.22 percent more than a mixed fuel building.

So it doesn't need as much PV, just 2.54 kilowatts. A savings of just over 5 metric tons of GHG per year qualifying for about 22,000 of the GHG incentive, 3300 or so for the incremental PV, 2300 for the high efficient building incentive. So about twenty -- just over $28,000 for the entire building. And, again, I'll make this high efficient. High efficient heat pump, high efficient air conditioner, high efficient windows. The model utility cost goes down to minus 14, the PV went down to 1.69. So a Title 24 percent -- Title 24 went to 12.2. And it saves a little bit more GHG. Adding it all up, you get the full 12,000 for the $1,000 per bedroom. So again, this is almost $9,000 more than the minimal efficient building for this setup, around $37,000 for Climate Zone 12.

Now, there's some buildings that will be in areas that have multiple utility combinations for the same climate zone. For example, Climate Zone 12, we also have SMUD as an electric utility provider for the same building.

And so what happens was you can see the model utility cost savings from this one is already over 5 percent, plus 36 percent. So there's no additional efficiency or any additional incremental PV needed for this to hit the 5 percent. And because of that, the saving 4.91 metric tons a year. The weighted GHG is $22,000. You're not getting any PV incentive because we're not requiring any to hit the bill savings. And it's going to get 2300 from the building incentive or $2,400 for the entire building or just over $2,000 per bedroom.

And so all these examples have included water heating and laundry energy in the model resident utility costs. So for a project that may have central water heating or central laundry, that energy would not be included in the model of resident utility cost analysis and could result in higher initial cost savings that may not need further efficiency or PV improvements to hit the 5 percent, very similar to how SMUD did it with this one.

So that's the end of the presentation. Back to you, Deana.

MS. CARARILO: Thanks, Larry. I appreciate it.

So again, going back to Step 1. And Steven, would you mind going back to maybe three slides? There we go. Close, next one. Thank you, Steven.

So what Larry just demonstrated was the BUILD calculator which is our approach at providing a simple tool for developers that haven't done their own modeling. And just a reminder that our technical assistance provider as well as CEC staff will be here with you throughout the process. We know that some of the statutorily requirements aren't easy to navigate and we're here to assist.

Okay. So going back to Q&A, we're open for questions on the participation process. Again, if you're calling over the phone, dial star 9 to raise your hand, and star 6 to mute or unmute your phone.

And while we're waiting for any questions to come in, there's two items I'd like to note. To add another level of flexibility, we are allowing for payments to be made to third parties as designated by the applicant. So that's another way that we have incorporated some flexibility for the users.

In addition, while we recognize that this is a three-step process, it is a first-come, first-served process. You will be in queue based on your electronic submission of the application for the reservation and the commitment.

MS. MILLS: Great. Deana, we have a comment from an anonymous attendee. What is the estimated date the reservation process opens?

MS. CARRILLO: Yeah. Good question. I will get into a little more detail on that. Our goal is to get your public comments, and assuming that we got things mostly right. On December 15th, we will then take those comments, look at the guidelines, and then post another version of final guidelines for adoption in January to bring these guidelines ultimately to the Energy Commission for approval in February, and then they get submitted to the PUC for final approval.

Once that is done, then we'll be able to launch. Estimated date is February, March 1st. -- roughly, we're working as hard as we can.

MS. MILLS: Great. Thanks. We have another question from Cara Vereschagin. Has a draft payment claim form been published for review yet?

MS. CARRILLO: The information we're requiring with each payment claim can be found in the administrative section and the appendix. If someone who made, perhaps Adrianna or Myoung-Ae, might be able to highlight those chapters and the page numbers in those guidelines -- for the participant.

I would say that the form itself isn't available but the information that we're requesting is available. We will be working on creating an online system for folks to submit information. Until then, we might have some forms

for you to fill out as we launch with a phased approach.

MS. MILLS: Great. One comment from Merrian Borgeson. Thanks for all your work to figure out ways to get money to applicants as early as possible. I think with that we can move on.

MS. CARRILLO: Great. Next slide, please.

Okay. Evaluation, Measurement, and Verification. Or EM&V.

Next slide, please.

Statute requires the program evaluation metrics at a minimum include the number of low emission systems installed in each type of building, projected utility bill savings, and the cost per metric ton of avoided GHG.

Next slide.

Data collected through the program includes both the technical assistance provider and applications, and other CEC data collection efforts including the interval metered data under Title 20, Chapter 3 of the Data Collection Regulations for those that are following them, will also be used in program evaluation.

The CEC will be working with the PUC EM&V contractor Opinion Dynamics along with the PUC is joining us today.

Next slide, please.

I'd like to introduce Abhilasha Wadhwa from the

PUC and Ellen Steiner from Opinion Dynamics.

MS. WADHWA: Thank you, Deana.

Good afternoon. Can you hear me?

MS. CARRILLO: Yes, we can.

MS. WADHWA: Wonderful. So I'm going to share my screen.

Okay. First of all, a huge shout out to my colleagues at CEC for a wonderful job. I share Commissioner McAllister's sentiments that it is great to be at this juncture and thank him for his leadership and also Commissioner Rechtschaffen's leadership. The feeling is mutual. We are very excited to have you as partners, and today, I'm here to simply give a broad brushstroke of the statutory and regulatory requirements for evaluation, measurement and verification of the BUILD program.

In just a few short slides, I'll be handing it off to the independent evaluator Opinion Dynamics so they can go through their proposed requirements.

So very quickly, for those who are new and are attending the BUILD development process the first time at this workshop, Senate Bill 1477, as Camille highlighted in 2018, set up the approval or the authority for these programs to launch, and it set up the programs have structures such that CPUC would need an oversight on the BUILD program which basically allows us to be partners with

CEC and facilitate all sorts of, you know, data sharing arrangements, contractual arrangements from the IOU sites. So, again, we are very excited for the partnership.

Public Utilities Code 91.1B(4), I'm highlighting only the parts that are relevant to EM&V here, requires that PUC ensure development of the program guidelines include a process for evaluating new technologies and a process and a set of metrics by which to evaluate and track program results. And Deana in just a couple of slides before shared with us what some of the required metrics are.

Further, as the CPUC decision approved these programs taking authority from this -- provided by the statute. It also develops further guidance for the rule of the program evaluator as well as the implementers. And I will quickly share that.

So for the rule of the program evaluator, given that these are pilot programs, PUC was very keen to make sure that we have the information that these pilots should give us before these are scaled up. So there should have -- there should be, speaking from when the decision was launched, the idea was that there should be robust data collection. Also that we are appropriately learning from these pilots before we scale them for much larger implementation.

There's a huge stress on real-time substandard feedback built for scaling the programs as well as to give the feedback back to the program implementers to course correct and fine tune their programs.

Finally, the expectations from the program administrator, which in this case is CEC in the case of TECH, it is another third party. The CEC shall also collect program performance data and information to inform the evaluation and lend insight to program successes and failures. Data collection plans should be coordinated with the Commission and the program evaluator. Once again, there's a huge emphasis on data-based evaluation on, you know, data that is reliable. And data collection is therefore expected from both the BUILD program administrator, that is CEC as well as the TECH implementer, and there is again emphasis on substantial real-time feedback to support the success of these programs.

And with this, I will hand over the mic to Opinion Dynamics, who were the selected program evaluator after a rigorous RFP process, which was led by SCE with CPUC oversight. And this contract was awarded to Opinion Dynamics and their subcontractors. And they came onboard officially as of August of this year. So they have been working hard to line up with the BUILD program guidelines' development.

And I will stop my screenshare and hand it to Ellen Steiner from Opinion Dynamics to walk you through the proposed requirements.

MS. STEINER: Great, thanks Abhi. Let me share my screen here really quick.

Okay. So my name is Ellen Steiner. I'm a vice president in Opinion Dynamics, and I have the fortunate role to be the director of the BUILD evaluation team. I'm really excited to be here today to share with you the proposed EM&V guidelines for the BUILD program.

So I want to give you a quick update on our current evaluation status. As Abhi mentioned, we were hired in August of 2021, and we've been working with the CEC to develop a comprehensive evaluation plan.

Now really, there's four key overarching goals to the BUILD evaluation. Really, to evaluate the program's implementation, to again evaluate program impacts including those measures that you heard are outlined in the statute, to evaluate BUILD program's long-term market impact, and really ensure implementers comply with the CARB rules regarding Cap-and-Trade funds.

Now, I want to be clear today that the proposed EM&V guidelines I'm going to be discussing are specifically to address one part of goal two. That's so that this onsite metering portion to assess impacts at the program

and the measured level. That's kind of our goal here today.

So, let's talk about why BUILD is well suited for real-time embedded EM&V. So BUILD, as you know, is a whole building new construction program. Generally, data collects from individual energy and uses can be captured near instantly, but it's really expensive, and so installing web-enabled metering devices after the original amount incentivized equipment has been placed in service adds cost of labor and materials, while also really being disruptors to the building occupant.

However, in the case of the BUILD program, these monitoring devices can be installed at the time of construction. This incremental cost will be significantly less than installing them separately and after the building is occupied. Now I want to be clear, these incremental costs will not be borne by the program applicant, but instead it'll be covered through the BUILD program evaluation funds.

Second, of course, as we've talked about today, it caters to multifamily properties. We know that multifamily properties suffer from a well-known split incentive problem, wherein the property owner/asset manager does not have direct insight in the conditions of equipment installed in individual units is therefore often unaware of

pending maintenance that could optimize equipment performance. So again, equipment monitoring devices also are advantageous to the building owner because it provides a property-wide energy management solution and saves building owners expensive repairs that would otherwise occur from premature equipment breakdown.

Our two last points is that the BUILD program will incentivize multiple end-use appliances. So as you will see in the BUILD -- the draft BUILD program guidelines in Appendix B, there are various technologies, all of which could be incentivized within a project if the applicant chose to do so. So again, a single project could have a heat pump water heater, a space conditioning equipment, smart thermostats, cooktops, et cetera.

Some metering in these technologies, such as using a smart electric panel, allows us to track each incentivized measure, and by installing them during a construction process, we can make sure we can measure that usage at that equipment level in addition to the whole home level.

Then finally BUILD is a pilot program, the uncodified section of Senate Bill 1477 recognizes that there are a range of technologies that can be used to achieve deep emission reductions in buildings. And so being able to again track the GHG reductions for each of

these measures individually as well as a whole building system is important.

Therefore, with all of these four points, it's really important that we can accurately account for the GHG reduction potential individual technologies, and this is important through empirical field-based data as opposed to modeled or mathematical estimates. And you want to be able to understand a lifecycle performance, degradation curves and failure thresholds of these new technologies so that their large-scale deployment is done based on sound evidence.

So this could enable the program regulatory agencies to provide iterative feedback to manufacturers and improve these technologies based on our data gathered in real non-laboratory situations as well as inform policy decisions to scale future electrification programs.

Just really quick, we are looking at currently interviewing manufacturers to develop a list of evaluator-approved monitoring devices that applicants would be able to select for. We are trying to establish parts with more than one manufacturer so that the BUILD applicant has choice when deciding which device to install. Right now, we are considering web-enabled technologies that really fall into two categories: the whole-house smart panel and connected circuit-level metering devices.

So whole-house smart panel probably sounds like the words on the screen. Look. It basically replaces the standard electrical panel and enables occupants to switch off and -- on and off circuits for safety reasons as well as to switch loads on battery storage, if needed. A connected circuit-level metering device is installed within the standard panel, and that again enables us to measure individual circuits as well as the whole-house level.

So this has led us to four proposed EM&V program requirements. The final evaluation plan will provide the remaining working details of these requirements such as applicant sample size, proven list of monitoring devices, the process for procuring the devices, approved incremental cost, et cetera.

We are recommending these four requirements. Number one, if selected for real-time monitoring -- and I do want to emphasize that. So this will be a sampling approach. This is not -- we're not asking you to do this with every single unit within your building or every single building. We'll be doing a strategic sampling approach, and then if you are selected for real-time monitoring, we will ask you to install evaluator-approved monitoring devices on the BUILD incentivized property and/or unit. Again, we will provide a list of those approved panels as well as a streamlined process to procure them. And again,

the applicant will not be responsible for any incremental cost for the monitoring devices but agrees to coordinate with us to ensure their timely procurement.

The second requirement is an Internet connection. All of our devices do require a wireless Internet connection. So we would ask that you ensure availability of such connection on the BUILD incentivized property needed to transmit the data from the smart device to the device manufacturer and the evaluator.

Now to set up the third requirement, we want to draw your attention to Conclusion of Law 29 in the building carbonization CPUC decisions. And I quote, "It is reasonable to provide IOU customers the option of voluntary public donation of their energy use data rather than assume that every customer is unwilling to share their individual energy use data for public interest decarbonization-related research."

So continuing that, the actual requirement that we're agreeing -- we're asking you to agree to inform the future building occupant that, one, the property is incentivized through ratepayer dollars approved by the legislature and the CPUC for reducing greenhouse gas emissions from buildings, and is subject to energy monitoring to ensure bill savings for the building occupant. And two, if selected again for real-time

monitoring, that you would obtain consent from the building occupants, the CPUC and their program evaluator to collect data from the installed monitoring devices.

We would see this form being signed at the time of lease or a mortgage agreement. We at the moment foresee this form to be just a single form that's an opt-in situation for the second part. We will provide you that disclosure form.

And then finally, number four is cooperate with the evaluator to facilitate EM&V activities such as occupant surveys, interviews with project professionals, and access to incentivized property as needed.

So at that, we're at questions.

MS. CARRILLO: So just a reminder here. If you are on the phone, dial star 9 to raise your hand and star 6 to mute and unmute your line. You can raise your hand via Zoom or type your question in the Q&A section.

MS. MILLS: There is one question coming through, one hand raised from Nehemiah Stone.

Mr. Stone?

MR. STONE: Can you hear me okay? Can you hear me okay?

MS. MILLS: Yes.

MR. STONE: Right. So Ellen, my question is what monitoring equipment will be installed? And the reason I'm

asking this is that just getting the power usage often can give you misleading information if you don't have ambient temperature, for example, or in case of water heaters, the amount of hot water being used in a day. So are you just going to be monitoring the performance of equipment or are you going to be monitoring the related data that can help you better understand that data?

MS. STEINER: That's a great question. We plan to do both. In terms of what the exact sample sizes will look like, we're still kind of in the process of developing that. But yes, you're absolutely right, we want to collect performance device data but also compare, you know, add that, which is why we added that requirement number four of helping us be able to survey occupants and such to get that related data so we can paint an entire picture. Does that make sense, Nehemiah?

MR. STONE: Yeah, it does. Second question, I was recently involved in an EPIC research project where we had to collect the data in real-time, and the biggest issue we had was losing Internet connection, having equipment cycle off, or momentary power outage that things wouldn't come back on.

I noticed that you are requiring the owner to provide the Internet service and connectivity. Have you

thought through what happens if the owner doesn't get around to fixing something for a couple of months?

MS. STEINER: Not specifically, Nehemiah. I know we have it as a consideration, but we have not come up with a direct answer to that. But you're right, it's a very good question.

MR. STONE: Okay, thanks.

MS. MILLS: We have another question from Natalie Laughlin, written comment. Who is paying for the Wi-Fi requirement?

MS. STEINER: At this point, it would be the applicant.

MS. CARRILLO: And to clarify, Ellen, that would be to the applicant over the lifetime of the equipment? Or there a period of years? So that they can think about cost.

MS. STEINER: Yeah, I guess it would be to the lifetime of the equipment.

MS. CARRILLO: And that would be the installed equipment, not the monitoring equipment?

MS. STEINER: Right.

MS. CARRILLO: Probably have to be the monitoring equipment.

MS. STEINER: Yeah, obviously, the monitoring equipment would theoretically need to last as long as the

installed equipment, but should not be an issue based on our research. So yes.

MS. MILLS: Great, thank you. We have another question.

MS. CARRILLO: Ellen, we have another question. Oh, go on.

MS. MILLS: Ellen? How do you --

MS. STEINER: Yes?

MS. MILLS: It's from an anonymous attendee.

MS. STEINER: Great.

MS. MILLS: How do you plan to address the inherent differences in energy modeled predictions versus meter-based data? Just by their nature, there will be differences in the two.

MS. STEINER: Yes. So again, we will -- we have talked at length about that and how do we discern which is noise based on what we are actually measuring to actual data. And we have some ideas, but we're still kind of finalizing that piece as well.

MS. CARRILLO: And Ellen, one other question I'd like to pose, or really, a comment to clarify --

MS. STEINER: Sure.

MS. CARRILLO: -- for our participants here.

The Energy Commission is requesting public comment on the language that was posted to the docket by

December 15th because the EM&V requirements may be included in our guidelines.

You just spoke of another public comment period or another approval process. Could you provide the stakeholders with some context of how they relate or don't just for clarity?

MS. STEINER: Absolutely. So this first process that we're talking about here today aligns with the overall guidelines request for comments by December 15th. And again, we are definitely looking for all of these types of questions that you're asking are great. The other pieces are also in progress as quickly as we can. And we will have an evaluation plan and final elements of these requirements such as the disclosure form I mentioned and the list of EM&V evaluator-approved monitoring devices available, and we're aiming for that by mid-January.

MS. CARRILLO: Okay. Thanks for that. Looks like we might have one more.

MS. MILLS: From Katie Ackerly. [Indiscernible]

MS. CARRILLO: [Indiscernible] perhaps?

MS. MILLS: Yep.

Mr. Stone, I will ask you to unmute.

MR. STONE: Right. These are follow-up questions you answered to somebody else's question.

MS. STEINER: Sure.

MR. STONE: If you planning to monitor for the life of the equipment, some of the equipment we're talking about here has a useful life somewhere between 12 and 30 years. Is your contract extending out 30 years?

MS. STEINER: It is definitely not. So if you'll notice, it will be -- the data would go both to the evaluator but also to the CPUC, so it wouldn't necessarily be us as the evaluator. But the CPUC would want access to that data throughout the life of the equipment.

MR. STONE: Thank you. Thank you.

MS. STEINER: No problem.

MS. CARRILLO: Okay. Any other questions related to EM&V?

We did put a notice to -- out and a written document that describes the EM&V proposal onto the docket, and we request -- I'm just reiterating that folks can submit any other questions or comments even though you've provided it here but also in writing through that process.

MS. MILLS: All right.

MS. STEINER: That'd be great. I'll turn it back to you, Deana.

MS. CARRILLO: Thank you, Ellen.

MS. LEE: Hey, Deana, I think our last question submitted to this Q&A does relate to the EM&V, and we may want to have Opinion Dynamics or also CPUC help to address

that. So can we read the question from Katie Ackerly?

MS. CARRILLO: Yes. The question from Katie Ackerly is: Is commissioning of equipment, especially of the central heat pump water heater, supported by the program, separately from measurement and verification? It doesn't seem to be included in BUILD incentives. How are recommendations to optimize the equipment, either at start-up or ongoing, being communicated directly to the building operator?

MS. LEE: So could I suggest, Ellen, can you address the last part of that question and then we can step back to the funding part?

MS. STEINER: Sure. Can you repeat the last -- let me pull it up as well.

MS. CARRILLO: How are recommendations to optimize the equipment, either at start-up or ongoing, being communicated directly to the building operator?

MS. STEINER: That would not be covered under EM&V, but probably I would assume potentially through Tech Assistance and BUILD program guidelines.

Deana, what are your thoughts on that?

MS. WADHWA: This is Abhi, from CPUC. Is it okay if I step in on that question?

MS. STEINER: Yeah, please.

MS. WADHWA: So my understanding is -- and I think Ellen presented this in one of the slides. There is some of this equipment that the evaluator is still finalizing, but some of it comes with energy management system software, right? It's just an added benefit. So when those requirements are being finalized, then possibly the evaluator could look at and, you know, from CPUC side will coordinate with CEC to make sure that that benefit is maximized. Like -- absolutely since ratepayers are paying for this equipment, we would like that communication to happen and for all those who are selected to be able to take benefits from that energy management system.

So it's definitely on our mind, and it's a three-way communication. It's between the operator, and the manufacturer, as well as the manufacturer and evaluator/CPUC. Right? So we're very aware that that part needs to be thought out such that the benefit going to the asset management company as well.

MS. CARRILLO: Katie, did that answer your question? And if you have a follow-up question, you could raise your hand.

MS. LEE: Deana, I do think there's a first part to the question. And Katie, if you have the ability to speak, maybe you can help to confirm our understanding.

I'm reading the part of the question that I think

is asking for the cost associated with the EM&V and whether those are included in the BUILD incentives.

But again, Katie, if you can help to clarify, that would be great.

MS. MILLS: She has her hand raised, so I'll go ahead and allow her to talk.

Katie, if you can unmute yourself.

MS. ACKERLY: Yeah, sure, hi, thanks. I'm just still wrestling with like what, how this is going to intersecting with how a nonprofit building owner and operator would interface with this program. I know they don't typically invest in, just like the basic commissioning. So.

When we've done electric projects, you know, we've really insisted on having someone kind of check the equipment at startup, and ongoing monitoring is great too, but just to know. It seemed to be kind of slipping through a crack somewhere. Just kind of basic commissioning interface, you know, right between the --

MS. CARRILLO: Yeah.

MS. ACKERLY: -- end of construction with the operator and the handoff there. I can make a comment on the docket.

MS. CARRILLO: Thank you, Katie. We appreciate that.

Any other questions relating to EM&V. Again, you can raise your hands, dial star 9 and star 6 if you're on the phone, or you can type your question into the Q&A. [Indiscernible]

Okay. So with that, I do see a few questions related to Slide -- bear with me. Related to the budget, and that would be Slide 8.

Steven, would mind bringing us back online and bringing up -- Slide 8?

So the questions we received, will funding be apportioned regionally or will it be applied accordingly to project eligibility regardless?

And then another question that we received, is there a certain amount of the $60 million going to specific regions of California?

So the funds here must be allocated based on the incentive and the technical assistance, based on the contribution of the gas-contributing territory. So yes, there are all electric buildings that will be developed within these gas territories. I recognize now that we didn't do this map for you, these are the incentive values that you'll apply the percentages to that incentive amount, that we would be setting aside for each gas territory.

All right. so Steven if we could -- head back to where we were, which I think was just general comments.

Again, please limit your comments to three minutes. We do ask that they be submitted in writing as well to the docket. If you'd like to comment or ask a question just generally about the program, you can use the raise hand feature. Over the telephone, you can dial star 9 to raise your hand and then star 6 to mute or unmute. Or you can type your comment in the Q&A window.

And during this time, I would like to reiterate that we went over broad strokes today, there are more details in the guidelines. So if you take a close look, we definitely want to make sure that the written guidelines work for the industry and for your projects. So please review them in detail and provide us your written comments.

Okay, Next slide, please.

For our next steps. Here's our public workshops for the day. We're asking for public comments on the guidelines as well as the EM&V proposals by December 15th. We'll be considering those public comments over December and January, and then we'll be posting final guidelines for consideration for adoption by the Energy Commission in mid-January.

There will be a written public comment period of approximately ten days during that time with an effort to get the program off the ground and launched. The guidelines will be brought to a CEC business meeting for

consideration of adoption and then be submitted to the PUC for approval. We anticipate the program launch in early March, if not before.

Next slide, please.

This is just a glimpse of our website. Please submit your written comments by December 15th using the e-comment link on our website. And if you haven't already, please subscribe to the LISTSERV.

It looks like we've got a few more raised hands and questions. So let's just take a minute to take those.

MS. MILLS: And I see one from Scott Higa. You can unmute yourself. Scott, are you there?

MR. HIGA: Sorry, that was a mistake. You could bypass my raised hand there.

MS. MILLS: Okay, thank you.

MS. CARRILLO: Nice to see you, Scott.

Okay, next slide please.

And with that, I want to say thank you. I want to thank Ellen and Abhi for joining us today, for the Commissioner and their advisors for their leadership, for all of attendees on the phone for being with us each step of the way.

Here is our email and our website. Please don't hesitate to reach out. And again, we would love to get

your comments in writing by December 15th and get this program launched.

Thank you so much for joining us. I should make one last -- any last words from any of our panelists or the Commissioner before we say goodbye?

Okay. Well, with that --

COMMISSIONER MCALLISTER: Can you hear me?

MS. CARRILLO: Go ahead, Commissioner.

COMMISSIONER MCALLISTER: No, sorry. I double-muted there. But no, just thanks for all your work on this. It really comes through, and the whole team.

Really excited to get people's comments, and, you know, please just -- highest priority is let us know how we can do what's needed in terms of the best program design, but also make it, participation as easy and widespread as possible. I think that's really -- yeah, we want them in the market. And I sort of implied this at the outset, but, you know, as this program rolls out, -- it's the structure that I think has a lot of promise to do even more and better things. We can, you know, take more resources, but also, you know, could be a program vessel that really helps this marketplace evolve even further and faster,

So want to really get it right and be flexible to improve along the way. So that comes from stakeholders

like everybody in attendance today, and a good project team which we have. So.

So thanks everybody for your attention.

MS. CARRILLO: Thank you very much for your time. Have a wonderful day.

(The Staff Workshop Adjourned at 2:05 p.m.)

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 20th day of January, 2022.

Elise Hicks

ELISE HICKS, IAPRT CERT**2176

CERTIFICATE OF TRANSCRIBER

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.

MARTHA L. NELSON, CERT**367

January 20, 2022