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CALIFORNIA ENERGY COMMISSION

STAFF WORKSHOP

In the Matter of:	)	Docket No.
	)	17-IEPR-08
	)	
	)	STAFF WORKSHOP RE:
2017 Integrated Energy Policy	)	Joint Agency Workshop
Report	)	on Senate Bill 350
	)	Low-Income Barriers
		Study Implementation

STAFF WORKSHOP ON
JOINT AGENCY WORKSHOP ON SENATE BILL 350
LOW-COME BARRIERS STUDY IMPLEMENTATION

CALIFORNIA ENERGY COMMISSION

THE WARREN-ALQUIST STATE ENERGY BUILDING

FIRST FLOOR, ROSENFELD HEARING ROOM

1516 NINTH STREET

SACRAMENTO, CALIFORNIA

TUESDAY, MAY 16, 2017

9:31 A.M.

Reported By: Peter Petty

APPEARANCES

Commissioners Present

Robert Weisenmiller, Chair

Andrew McAllister

Janea Scott

CEC Staff:

Bill Pennington, Senior Technical and Program Advisor to the Energy Efficiency Division

Heather Raitt

Michael Sokol

Alana Mathews

Pam Doughman

Joint Agency Participants:

California Public Utilities Commission (CPUC):

Carla Peterman

Cliff Rechtschaffen

Martha Guzman Aceves

California Air Resources Board (CARB, ARB)

Richard Corey

Sam Gregor

Governor’s Office

Alice Reynolds

APPEARANCES (Cont.)

Presenters

John Chen, Los Angeles Department of Water and Power

Panelists:

Maria Stamas, Natural Resources Defense Council

Vanessa Guerra, Mutual Housing California

Sophia Hartkopf, TRC Solutions

Nick Dirr, Association for Energy Affordability

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Andrew Dugowson, Southern California Edison

Matt Perry, Energy Upgrade California

Sarah White, California Workforce Development Board

Carol Zabin, UC Berkeley Labor Center

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Public Comments: (* Via telephone and/or WebEx)

Bong Vergara

I N D E X

P R O C E E D I N G S

May 16, 2017 9:31 a.m.

MS. RAITT: Good morning and welcome to today's IEPR Joint Agency Workshop on Senate Bill 350, the Low Income Barrier Study Implementation. I'm Heather Raitt, I'm the IEPR project manager. I'll go over our usual housekeeping items. If there's an emergency, please follow staff to evacuate the building to Roosevelt Park across the street from us.

Our workshop today is being broadcast through our WebEx conferencing system so parties should be aware you're being recorded. There will be an audio recording posted on our website in about a week and a written transcript in about a month.

We do have a very full agenda, so I'd like to remind our speakers to stay within your allotted time. At the end of the day we will have a public comment period where folks can present comments and we are limiting them to three minutes each. If you'd like to go ahead and fill out a blue card and you can give it to me to let us know you want to make comments.

And for the folks on -- sorry. For folks on WebEx, hi. For folks WebEx, if you want to make comments at the end of the day, please go ahead and raise your hand, tell our WebEx coordinator that you'd like to make comments. And we only do comments at the end of the day.

Materials for this workshop are available on our website and at the entrance of the hearing room. Written comments are welcome and they're due on May 30. And the notice provides information on how to submit written comments.

And with that, I'll turn it over to the Chair for opening remarks.

MR. WEISENMILLER: Good morning. I'd like to first thank all of my colleagues on the dais for being here today and also thank all of you for participating. Obviously, one of the things that are very important to all of us in this administration is to make sure that all Californians can participate and benefit in our clean technology programs. Energy Commission got the charge under SP 350 to do a report on the barriers to such participation and we adopted that report. It's going into this year, we're now focusing on implementing the recommendations. Commissioner Scott on my right is sort of leading up the implementation effort along with Michael Sokol.

Let me get some brief comments on the -- encourage everyone on the dais to give some brief comments so we can move forward.

We'll first start with Alice Reynolds from the governor’s office.

MS. MILLS: Thank you very much. And I’ll start by saying that I am really pleased to be here and also wanted to thank CEC staff for organizing this workshop. And communicate the strong support of the governor’s office for the process that we’re involved in here.

This is a very important issue that we’re all grappling with and everybody knows that we can’t transform to a low-carbon economy if we’re not including all Californians in that transformation.

And just the concept of looking at barriers shows that we don’t have a smooth road to travel. We know there are barriers that exist. And so we -- realizing that challenge, we have, you know, in addition to this workshop, we’ve started to get a number of agencies together. We’ve formed a taskforce to make sure that implementation proceeds in a way where all agencies are coordinating, and we kicked off that taskforce last week. And just to let everyone know, we are not as far as agency participation, we’re not starting from scratch. We have members of the taskforce who are very well informed about the issues that we’re looking at. We are not starting from, okay, you know, that this is the baseline, we’re starting from a very high level of engagement and motivation. We have committed members of the taskforce. So we feel like we’re very well positioned to start this process.

I look forward to this workshop today and encourage participation and I think that the agenda has a lot of very substantive presentations. So I'm pleased to be here. Thanks a lot.

MR. WEISENMILLER: Thank you. Richard. Do you want to say?

MR. COREY: Yes. Thanks, Chair Weisenmiller. And I equally am really pleased to be here because SP 350 calls out a number of really important elements, but Alice just talked about a key one and that is recognizing that clean energy and clean transportation, there are some barriers for lower income disadvantaged communities to fully take advantage.

And in recognizing that, the director's direction to the energy agency CEC, ARB was really to focus on public process to clearly articulate and identify those barriers. But clearly that's part of it, the key part is what do you do about it? I think that's part of this discussion and how we're going to move forward and what we're really looking forward to.

From ARB's perspective, clearly moving forward on clean transportation will require a tighter link, a tighter link between the energy sector because that clean transportation is electric transportation. We're clearly on that path for on the light-duty side cars and trucks. We're progressively moving that way for heavy duty. So looking through options, opportunities to really take better advantage to ensure those technologies. When I say those technologies on the transportation side, that's zero emission vehicles, near zero emission vehicles, it's ridesharing, it's walkable communities, bicycles. A full range in terms of how we plan communities, how we execute, how we manage, execute, incentive programs.

So there's a great opportunity if we do this correctly. And I look forward to the exchange that takes place today and the process going forward. So thank you.

MS. SCOTT: Good morning, everyone. I would just like to echo the remarks that you've heard from Alice and from Richard and from Chair Weisenmiller this morning. As you all know, it can't be overstated the importance of making sure that low-income communities and disadvantaged communities are a part of the clean energy revolution that is taking place in the state even as we speak.

And so putting together the study as directed by the legislature under SP 350, the Energy Commission's portion was focused on renewable energy and on energy efficiency. We came up with 12 recommendations and some of those recommendations we will be discussing in great detail today. So I'm very much looking forward to the panels.

And what we’re really looking to do is figure out how we put in place some solutions to start really addressing these barriers and solving them.

As Richard mentioned in his remarks, many of these recommendations are crosscutting and they reach beyond just the Energy Commission and that is why we have been working in partnership this whole time. This isn’t something that just started this morning at our workshop but we’ve been working with the governor’s office, we’ve been working closely with ARB on the transportation barriers. We’ve been working closely with our colleagues at the PUC. And this is a continuation of that great work together.

So I want to thank all of you for joining us on the dais as well. And I’m really looking forward to the panels today, so I will end my remarks here.

MS. PETERMAN: Good morning, everyone. I’m Commissioner Carla Peterman with the Public Utilities Commission. Thank you to the Energy Commission, Chair Weisenmiller, Commissioner Scott for hosting this very important forum.

In addition to what’s been stated already that we’ll have an opportunity here via the report and the discussion to think about new solutions and programs, I want to acknowledge that we have several existing programs that are focused on how do we provide better access to disadvantaged communities, low-income communities to our programs. So what I'm really looking forward today is also getting some insight into how do we get better utilization of the existing programs, what are the barriers to accessing those programs, and also how do we coordinate our programs more. For example, the two areas in which I'm particularly working on this issue relate to energy efficiency and electric vehicles, and we're constantly trying to think about how to target those who are in apartment buildings and multifamily dwellings. And so how do we do that outreach but not inundate folks with the same message or multiple messages about different programs. And so figuring out how we can best coordinate activities will be very useful.

An additional note, we've recently re-launched the energy upgrade California marketing and consumer engagement campaign which is focused on being a one-stop shop for information about access energy efficiency and clean energy programs and how can we better utilize that platform to reach the members of the community who may be in most need of these services.

So thank you. And I want to acknowledge we have CPUC staff here and thank you for the work they've done in coordinating with the Energy Commission on these efforts.

MR. RECHTSCHAFFEN: I'm Cliff Rechtschaffen, and also a commissioner at the PUC and I'm the lead commissioner work for the PUC on this barriers workshop and program. Although Commissioner Peterman and other commissioners are also working closely on related sets of issues.

As Commissioner Peterman said, there's a lot going on in this area SP 350 and other statutes and other recent developments has forced us to focus on how we best integrate environmental justice throughout the programs we run at the PUC, procurement, workforce development incentives, enforcement, and so forth. And there's a lot going on, some of which will be covered here, other things that are going on that won't be explicitly covered here.

The big picture is very important to keep in mind. Poor people spend a disproportionate amount of their income on energy in California. Some cases twice as much as middle income or affluent people. That's just going to get worse with climate change. Poor people live disproportionately in housing that's poorly insulated, leaky, has -- that have inefficient appliances. They also tend to live disproportionately in communities suffering environmental burdens. And to date, they have not shared equally in the benefits of our clean energy and clean transportation programs.

You've heard and you'll hear today the extensive work of the Barriers Report. It did really an excellent job. I can praise it because -- it was a joint agency report but the CEC took the laboring on, they did a really outstanding job at identifying the barriers and coming up with recommendations. So we look forward to rolling up our sleeves and starting to implement the recommendations of the report.

MS. RAITT: Great. So we have two presentations to give an overview of the Barrier Study.

First is Michael Sokol at the Energy Commission.

MR. SOKOL: All right. Good morning, everyone, and thank you for coming out today. It's really exciting to see, you know, good participate up on the dais and out here in the audience. And a lot of interest and excitement on this topic and the steps that will be taken over the coming months and years to keep this conversation moving forward. So.

I'm Michael Sokol with the Energy Commission. I'm a coordinator for SP 350 implementation which includes the low-income Barrier Study. But really SP 350, I'm sure everyone's well familiar, but there's some major goals in there such as the 50 percent renewable energy by 2030 mandate requiring a doubling of energy efficiency savings by 2030 looking at encouraging widespread transportation electrification. And all that is under -- underlined by a shift towards integrated resource planning to reduce greenhouse gas emissions across the electricity sector.

But really a theme throughout SP 350 and the reason why we're here today is that there's a strong priority place for low-income customers and disadvantaged communities to participate in the benefits that clean energy and clean transportation provides.

So really the, again, the requirement from SP 350 for what we call the Barrier Study is to identify the barriers faced by low-income customers including those in disadvantaged communities in accessing photovoltaics and other sources of renewable energy and energy efficiency and weatherization investments. Also SP 350 require the Energy Commission to evaluate the barriers faced by local small businesses in contracting, local small businesses in disadvantaged communities. And lastly, you'll hear more about this in just moment, but ARB also completed a study on the low-income, the barriers faced by low-income customers in clean transportation options.

And so SP 350 kind of gave us the playbook, but in October 2015, that was signed. And so the Energy Commission, ARB spent the majority of last year really working through the scoping process of these studies. And so the Energy Commission, we completed an extensive literature review of over a hundred-plus articles. We engaged a lot at the local level with a number of meetings across the state including with ARB participation and with a lot of community-based organizations and locals. So at least seven of those meetings were held across the state. We also had a couple of technical workshops up here in Sacramento to really have some good panel discussion and set the foundation for providing input into the report.

And, again, there was extensive outreach in a variety of formats including fact sheets in a number of languages, social media campaign, and we all brought all of that together for the final report which was adopted here at an Energy Commission business meeting last December. So it's available online for everyone that hasn't seen it yet. Hopefully you'll get a chance to dig in to it and then we'll talk a little more about what steps has been taken since then.

As everyone mentioned up on the dais, really even though we've finalized and published this study, this is really the first step and it's starting the conversation for how we carry things forward, how we look at the recommendations that I'll describe in just a moment here, and then figuring out how do we really make a difference for enabling access for low-income customers to clean energy.

So just quickly I'll overview the barrier categories that were identified in the Energy Commission's study. There were a number of individual barriers identified. Oftentimes there's sort of crosscutting but what we did is categorize them into three major categories starting with structural barriers or those that are inherent to the conditions of poverty. Those are difficult to address through some of our programs alone but there can be differences made.

The second category is looking at policy and program barriers. And that's really identifying opportunities for improvement of market delivery and making sure that programs are aligned in a way that's going to amplify benefits for low-income customers.

And then the third category are barriers that are specific to local small business contracting in disadvantaged communities.

So just at a high-level, hitting on the structural barriers, a majority of low-income Californians are renters, so there's a little homeownership rates and specifically when you get into multifamily buildings, there are some issues that are difficult to address such as split incentive issues, complex kind of financing needs, and obviously lack of ownership complicates matters. Even if a low-income customer does own their home, there's oftentimes insufficient access to capital or, you know, lower credit scores can be an issue. And so making sure that there's financing options that don't require customers to take on significant new debt and really inspire additional investments to be made are needed.

The building age can often be an issue when it comes to upgrades such as installing rooftop PV or even energy efficiency upgrades. And then there are some unique barriers faced by remote or underserved communities who are oftentimes, you know, have high heating and electricity costs are kind of very far out. And given the population density is not as high, we want to make sure that they're still included in the discussion as we move forward.

So on the second barrier category looking at really program and policy barriers, market delivery can be an issue, if there's lack of consistency in coordination across the programs here looking at eligibility criteria and making sure that it's clear who's eligible for what and how to navigate that process. Really, looking at data limitations which one of our recommendations touches upon but making sure that there's consistent data shared across programs and that it's -- you can compare apples to apples to the degree possible and make sure that everyone's sort of talking about the same thing.

Then of course unrecognized non-energy benefits that, you know, oftentimes are not fully considered in sort of the cost effectiveness test and so thinking about ways to make sure that health and safety particularly are incorporated into clean energy and transportation programs.

And lastly is the small business barrier category. Really this is looking at lack of access of information, about funding opportunities, about partnership opportunities. Technical assistance and workforce development was highlighted as a clear need that some of these local small businesses could benefit from technical assistance of navigating say grant funding or solicitation processes or understanding how to reach out to the appropriate folks and form the right kind of team that's going to lead to success for a contract.

Lack of access to the financial resources that are often needed to, you know, submit those applications, submit those bids. Make sure that there's continuity to the business to keep the business flourishing. And then lack of access to support in terms of, again, kind of getting back to some of that technical assistance, understanding what the opportunities are within any local given area and really making sure that there's participation is a possibility.

So out of this whole study, there were 12 recommendations that were formulated and we categorized into five principal recommendations which are sort of the top five on the list that you see here, and then there are seven additional recommendations. As Commissioners mentioned, these recommendations are oftentimes crosscutting so they touch upon multiple barriers and barrier categories. And what you see here is actually just a summary level. If you look at the report itself, there's a lot more detail including a number of sub-recommendations and specific actions that should be taken.

So what you see underlined here, these are actually the recommendations that we'll be touching upon in some detail today and so you can see that four of the top five are at least on the agenda today. But I'll just run through them quickly and then we'll get into more of discussion which is really about -- so we have the recommendations, how do we move that forward and make sure that there's really action being taken and that the details are really aligned across the agencies in a way that's going to be most beneficial for these low-income customers.

So starting with Recommendation Number 1, which was to establish a coordinating taskforce across the agencies. As Alice Reynolds mentioned just a moment ago, that conversation has been started and we have some -- a lot of energy and some key players that are dialed in to that and so we'll look at that as sort of the vehicle for moving the conversation forward.

Second was looking at community solar options for low-income customers and making sure that the economic benefits of owning a portion of a solar system are able to be realized by those customers.

Looking at a strategy for a green workforce and education goals across agencies for clean energy and clean transportation.

Fourth is looking at continuing to develop a series of energy upgrade financing pilots to again unlock those opportunities that don’t require customers to take on significant new debt.

And the fifth of the principal recommendations was collaboration across agencies to make sure there’s common metrics and indicators that are going to be used and that there’s better data sharing across programs. And you’ll hear a lot more detail about each of these recommendations a little bit later today.

And then just real quickly, these are the seven additional recommendations. Looking really at expanding opportunities for renewable energy across existing programs for low-income customers. Looking at aligning tax credits and credit enhancements to support clean energy upgrades particularly during building rehab events. Establishing a pilot program for regional one-stop shops to basically cut across the silos to include things like energy, water, or other resources for low-income customers. Of course making sure that there's heightened consumer protection and that there's eliminating any cases of fraud and building trust at the local level to make sure that the benefits really can be realized and that the conversation is not something that's immediately causes people to shut down and not be receptive to the opportunities that are out there. Looking at better collaboration with local community-based organizations to make sure that -- that opportunities are delivered in language and in a relevant format from people that know the local area and that are connected with locals.

The Recommendation Number 11 is looking at research development demonstration to enable targeted benefits for low-income customers and disadvantaged communities.

And lastly was recommending a full in-depth study that looks at contracting opportunities for those local small businesses in disadvantaged communities. Really a data driven exercise that involves, you know, a lot of the other agencies. We've laid out a lot of some of the initial details in the Barrier Study but really think that that's going to require a bigger effort across all these agencies.

So just to wrap things up, as I mentioned, the joint agency taskforce, we had a kickoff meeting last Tuesday, May 9th. And Alice Reynolds has been facilitating that and keeping the conversation moving forward. But, again, there was great participation, great turnout, and we'll, you know, see what the next steps are that come out of that. Again, includes a number of agencies that were identified in the Barrier Study, not only ours but in ARB's that are impacted by the recommendations that came out.

And really there's some key objections of making sure that we're moving forward that conversation on how to implement the recommendations, that there's coordination across the programs in terms of opportunities for leveraging funding, aligning eligibility criteria, and encouraging standardization to the degree possible. And then really looking at how to prioritize key topics because obviously there's 12 recommendations from our study, there are a number of recommendations from the ARB's study, and then there's a number of even subactions. So making sure that we're able to prioritize our efforts and hit the most beneficial and most need term needs first before we continue to move down the conversation.

So just as next steps, you know, the Energy Commission will plan to participate in these future taskforce meetings. We're looking at a second implementation workshop. Obviously as I discussed, there's 12 recommendations in our study, a number from ARB, there's only four panel discussions today and then a presentation and so there's a lot more ground to cover and so we'll look to that August 1st workshop to fill in some of the gaps from today's discussion. Looking at opportunities for additional regional and community outreach to return to some of the communities that provided that input on during the scoping of the study.

And then looking at ways to track progress on the goals of SP 350 and particularly for this one looking at tracking progress for implementation of the report's recommendations and enabling those benefits that we're targeting for low-income customers.

So that's the end of my presentation and, you know, we'll be happy to take any questions at the end of the day today. Of course written comments will be open for a couple of weeks here. And then I'll go ahead and turn it over to Sam Gregor at ARB to provide the next presentation.

MR. GREGOR: Great. Thank you. Good morning, everyone. My name is Sam Gregor, I'm with the California Air Resources Board. I am the manager over the section that took on the efforts to develop the study to understand better the barriers that low-income folks have accessing clean transportation and other mobility actions in developing this document.

I'll reiterate what Michael said, it's been a lot of work over the last year, year and a half and I'm excited to see all of the participation, all of the positive feedback we've received from the communities, just getting out there and listening to them and understanding what they're actually going through to having these barriers and to understanding what we could do at the state level to develop policies to increase access has been very satisfying and very -- and I look forward to what we're going to be doing over the next few years.

I think Michael touched pretty well on what the overarching goals of SP 350 are so skip that slide.

Just to give you an idea of what SP 350 requires, it's ARB identify the barrier's low-income residents including those in disadvantaged communities. Face to accessing clean transportation options and provide how -- the recommendations on how to increase them.

This requirement resulted from the need to better understand barriers and opportunities across the state and support the broader goals of ensuring this access be far reaching to California's most impacted communities. The results of these efforts for ARB has been laid out and what we're calling a draft guidance document. And we released that for the draft for public review last month.

So in order to better understand the barriers and opportunities clean transportation access, we directly engaged with local communities and low-income residents. We selected a few case study communities that were represented of different regions and also developed a supplemental literature review which are included in the draft guidance document appendices.

We've reviewed access to, awareness of an overall affordability of clean transportation and mobility options. In addition, barriers and opportunities were reviewed across the spectrum of clean transportation and mobility options which includes not just light-duty vehicles, but access to clean transit, clean school buses. And then shifting away from vehicle ownership, we looked at ridesharing and car sharing opportunities with zero emission vehicles. And it was also important that we looked at active transportation. So how do we get safe infrastructure for walking and biking. So we looked at all of -- all of the mobility options that people utilize especially lower income folks who aren't always able to afford their own vehicle. There's a lot of different ways for them to get access to clean and zero emission transportation.

So next I'll provide an overview of the draft guidance document. Similar to CEC's barriers report, we see this as the initial step in an ongoing process which identifies barriers and more importantly provides an initial pathway to overcome them. The document is intended to span a broad spectrum of methods to increase the access to clean transportation, given each community has its own unique needs and that's one thing we were -- we really -- we're told up front that we need to look at different communities to understand that one solution doesn't fit all.

So the recommendations build-upon efforts already occurring to increase access to clean transportation, this document provides and encourages continued evaluation of the best practices to increase access and provides a foundation for future policies and investment decisions.

Next I'll describe briefly the key barriers that we found of when interact -- when talking with low-income folks. First off, you know, it's not new overall affordability of clean vehicles and clean transportation and mobility options. As was mentioned earlier, they don't have the income to be able to purchase zero emission vehicles or to access some of the services that more affluent people are able to do.

The second, sustainable long-term funding for clean transportation programs and energy programs. Current funding sources are not sufficient to meet the needs for expanding clean transportation for all residents, especially those in low-income and disadvantaged communities. This heightens the importance of working together to identify other potential funding sources for this effort.

The third barrier is an overall lack of awareness of clean transportation options due to a lack of access and exposure to zero emission vehicles, clean mobility options such as ridesharing in low-income communities. As well as educational opportunities leading to reduced understanding of the benefits of using clean transportation options.

And then the fourth is the further need to integrated transportation planning including coordinated land use and clean transportation policies across communities. There’s a challenge of differing geographic and demographic -- demographics across communities which creates a dynamic challenge and the need for multiple community-driven solutions.

And it is important to note that many of these barriers are similar to what other residents experience, but as was mentioned, these barriers are magnified for those that are low-income and living in disadvantaged communities.

The next slide, what I’ll do is cover the four key recommendations categories that we’ve -- we’ve included in the draft guidance document to be able to tackle the main barriers that I just described. The first one is to increase and prioritize funding on a current and new programs for clean transportation and mobility options. Examples include identifying permanent funding for current and new programs. That incentivizes a purchaser lease of new or used zero emission or near zero emission vehicles. Clean mobility options including walking, biking, ridesharing, car sharing services, clean transit, greening the schools, reducing vehicle miles traveled. How do we get people to be in more active transportation.

The second is expanding assessments to better understand the clean -- the specific clean transportation needs of low-income residents as part of a broader transportation planning efforts. Some examples include updating or developing new regional readiness plans for local transportation and land use focused on low-income. And ensuring a focus of low-income communities when establishing priorities for funding programs that maximize clean transportation access.

The third recommendation category is increasing awareness for expanding and targeted education and outreach. Examples of this include expanding educational curricula for kindergarten through 12th grade. Increasing knowledge of ridesharing and demand response options. And other ways to utilize zero emission transportation and active transportation options.

And the fourth category is maximize economic opportunities and benefits form the investments made in clean transportation. Examples include expanding access to educational opportunities in clean transportation production, maintenance, and infrastructure deployment, vocational training, pre-apprenticeship and apprenticeship program for clean transportation. Increasing access and advancing knowledge and skills to acquire good quality clean transportation jobs, and promoting affordable housing to transportation planning and advancements.

And finally, the next steps which Michael and the other folks have already talked about, we are going to participate and we are participating in the taskforce that was held, started last week. We are also planning on updating our board on May 25th to provide them with the results of what we've come up with and concluded. We also plan to return to the case study communities and meet with the low-income residents once again to let them know how their input was incorporated to ensure that we properly characterize the barriers and opportunities and help us prioritize what recommendations in the near term we should be focusing on along with long-term strategies.

And then based on board feedback, feedback we get from the public, the communities, we'll finalize the guidance document later this year.

As already been mentioned but I'll reiterate again, it's been fantastic over the last year and a half working with the local communities with all the different state agencies. There's a lot of different agencies that are working hard to increase access not only for transportation but for energy -- for clean energy and clean transportation. So I appreciate everyone's time. Thank you.

MS. RAITT: Thank you, Sam.

So I'd like to move on to our first panel which is solutions for multifamily building clean energy issues. And I'd like to invite our panelists to please come up to the tables. We have nameplates for you.

MR. PENNINGTON: So good morning. My name is Phil Pennington. I work in the Energy Efficiency Division at the Energy Commission. And I will be the moderator for today's multifamily panel. There really is trying to focus on solutions to how to substantially increase energy efficiency and renewable generation upgrades to low-income multifamily buildings.

Put that slide, please. Thanks.

We have an extremely strong panel here today made up of both experts in trying to accomplish energy efficiency and renewables in multifamily buildings as sort of a program delivery experts. And also two representatives of owners of multifamily buildings. So I expect this to be a lively discussion. The people on the panel are shown on the slide here, Maria Stamas of the National Resources Defense Council. Vanessa Guerra of the Mutual Housing California. Sophia Hartkopf of TRC Solutions. Nick Dirr of the Association for Energy Affordability. And Betsy McGovern-Garcia of Self Help Enterprises.

Next slide.

So the findings of the low-income Barrier Study led to the conclusion that achieving upgrades in low-income multifamily buildings is critical -- is critically important to accomplishing the governor's and legislature's goals for extending the benefits of energy efficiency and renewable energy generation to low-income persons and disadvantaged communities. So the report includes this particular recommendation, just kind of a sub-item under the first recommendation that calls for a taskforce of state agencies to develop a comprehensive plan that emphasizes low-income multifamily rental properties.

As the lead off panel for today's implementation workshop, our intent is to try to identify solutions for these super important multifamily buildings.

Next slide.

So the low-income barriers report contained a lot of information regarding the scope of multifamily buildings and the problems that make it difficult for owners of low-income multifamily buildings to make investments in energy efficiency and renewable generation upgrades.

This slide is a quick summary of material in the barriers report. The first three bullets show the large scope of multifamily buildings and, you know, the importance of that. A broad scope, 47 percent of low-income households who live in multifamily buildings, about 20 percent of the multifamily units are rent assisted which represents nine -- about 900,000 households. And 80 percent are market rate which represents about 2.4 million households.

The next two bullets here highlight the ever present split incentives problem where renters do not have the authority to make upgrades that would deliver them benefits of clean energy. And on the other side of the picture, building owners often do not pay the dwelling unit energy bills so there’s limited motivation for the building owners to invest in these upgrades that would benefit the renters.

The rest of the bullets on this slide are focused on the realities that face many low-income housing building owners. Complex ownership is common for these buildings, particularly for rent-assisted multifamily. And this means that there are many bosses who have to agree with taking risks to making upgrades.

Also the operation of multifamily buildings provides very limited income and this results in very tight operating budgets. As a result, energy efficiency tends to be very much on the margin of how that budget gets spent and tends to be, you know, the first thing to go when -- when the operation runs into difficulties. So also, you know, the intent for the building owner needs to really be careful with reserves so even if when there’s reserves for the billing operation, it tends to be difficult to spend those on energy efficiency or renewal generation.

Also often the owners are unable to take on new debt and then particularly for rent restricted multifamily buildings, upgrades are often only feasible at the time of rehab where refinancing occurs. And it’s really difficult to make upgrades sort of between a 15-year typical cycle of rehabs.

Next slide, please.

So the charge to this panel today is to propose solutions to substantially increase upgrades in low-income housing. This necessarily requires a special focus on how to motivate owners to invest in upgrades. There’s several dimensions that we want to address in the questions before the panel. What would each panelist recommend and substantially increase -- to substantially increase upgrades for deed restricted housing and for market rate housing, at major refinancing events, and outside of those refinancing events and in building where the building owner pays the utility bills and where the tenant pays the utility bills. And also what changes would each panelists make to current programs to enable owners to pursue more upgrades.

So we're going to start out by having about 8 minutes or so allotted to each panelist to provide a quick explanation of their role in low-income housing. And then for them to make their burning recommendations related to particular aspects of these questions that they have selected to address. And not every panelist is going to answer every piece of each one of these questions, but hopefully the panel in totality will cover all these questions and the parts of the questions.

Okay, with that as background, I'd like to begin first with Maria Stamas.

MS. STAMAS: Good morning, Commissioners. And thanks, Bill, and thanks for the opportunity to speak. And thank you also to the California Energy Commission for the barriers report and this extensive effort and focus on this sector.

I'm Maria Stamas, I'm with the Natural Resources Defense Council. And I primarily work at NRDC on a national initiative called Energy Efficiency for All where we're partnered with the affordable housing sector, program implementers, and a host of over 80 organizations across the country and including in California focused on bringing affordable housing sector together with the energy sector to focus on solutions for the multifamily low-income housing sector.

Understanding as Bill laid out that there is huge barriers but also huge opportunity. And so we've been at this for over four years now and longer individually but four years collaboratively and servicing solutions and programs across the country that are working and that are beginning to address a lot of these barriers that were laid out.

So I wanted to focus today on three major themes or principles in terms of solutions. And within each of these themes, there is several sub-solutions.

So the first one is just focused on ensuring that there's programs that are tailored for multifamily sectors specifically and tailored to the needs of the owner and ensuring that as we're designing programs, that the constraints that owners face in this sector are at the fore and understanding when they’re able to make investments, what constraints they’re operating under, and designing programs to help address those constraints.

So this takes a lot of different forms but, you know, you can imagine just by speaking with owners a lot of the solutions surface. So as one example, when we’ve been speaking to affordable housing owners, you know, if you imagine that you’re an owner for a minute and say you’re in Los Angeles and you’re trying to access programs for retrofit, you have depending on how you count, between about 28 and 36 different programs with different utility administrators and also different state agencies that administer these programs. It’s unclear whether each of these programs will have a budget by the time your construction starts so you plan a project out, you know, at least about a year ahead of when construction begins. So it’s unclear if incentives will be there, and then say you get to the point where you’re starting to apply to the programs, you have, you know, at minimum, you know, say you want to apply to seven different programs, you have seven applications. But some programs are only tailored to renters so each renter would have to first complete the application. So if you have a hundred-unit property, you have a hundred different applications for each resident plus the six other programs. So you can start to understand some of the complexities.

So I just want to highlight the importance of working with owners and having focus groups and ensuring that owners are part of the process and that programs are designed specifically with the owner in mind. Since I've laid out the owner is also responsible for authorizing investments and making the investments in the property both in the unit and in the common areas.

And wanted to highlight throughout these 8 minutes programs that are already doing this that we can learn from. So in Massachusetts, there's a lien program. And Massachusetts was actually very much had the landscapes more to California today where there are lots of different programs, different administrators, different jurisdictions, and it was very relatively fragmented. And so they came together and they created an advisory committee that included owners and they revamped their program that is combined with utilities and federal weatherization and they have an administrator that oversees all of the different programs on the back end and they created a single online portal for owners. And so you go to one website, you enter your basic information, and somebody will follow up with you and take you through the process and there's a single application, a single landing point, and it's very easy for an owner to understand where to go. So that's just an example on that end. So the theme work with owners, make sure they're part of the process and a lot of solutions will come from that.

The second point I want to emphasize and this follows the first point is the importance of one-stop intake and robust technical assistance. And so owners across the board but I think especially in rent-assisted housing and low-income housing overall, they have very limited bandwidth and they often don't have staff that are experts in energy or experts in all the programs that are out there. And so to the extent a program administrator can really provide robust technical assistance for owners to help them through the process, that's been really helpful.

And so we have a lot of examples of programs that are doing this today actually in California even so the low-income weatherization program that's funded through the greenhouse gas reduction fund and overseen by the Community Service and Development Department. That program is providing very robust technical assistance and is currently fully subscribed. I'd like to say as in part of a result of that.

And just briefly, often when we talk about technical assistance, I get a lot of questions well, what does that really mean? What's technical assistance? So want to just go through a list of some of what we think about with technical assistance. Owner consultation, benchmarking, onsite property assessment, negotiating with an owner the scope of the project, energy modeling, auditing, helping with procuring bids, working on permitting assistance, ongoing project management assistance. And all this can be tailored depending on the needs of the owner.

And that might sound really expensive but what we're seeing or my understanding from different programs is it's averaging about 50 to $100 per unit. So if you think about the overall cost of a project, that's really a small, small percentage but it's really helpful for owners and really critical.

And then the last category of recommendations I wanted to mention and Bill had asked us to speak to this, too, is metrics and goals and what are the best metrics to be using and how does data inform all of this. And so I think I cannot underscore the importance of goals and then sharing that what's driving program design is properly aligned with, you know, the overall state goals of ensuring that we're reducing bills for low-income residence and capturing as much energy savings and greenhouse gas reductions as possible. So, you know, having an energy savings goal or greenhouse gas reduction goal is really important and that directly corresponds with lower bills because the more energy you save, the less bills you have to pay.

I think right now a lot of -- right now, a lot of the programs that are out there in California don’t -- for low-income specifically don’t have an energy savings goal or that really drives programs. And so want to emphasize the importance of that.

Other nontraditional goals or metrics, program uptakes. So when you initially reach out to an owner, do they actually complete the retrofit at the end of the day and what’s that percentage of initial contact to completion. And from other programs that have this one-stop intake and robust technical assistance in Chicago, they’re seeing rates of from the first outreach to the owner to the completion of the property, over 40 percent of owners are going through that process. In comparison, a lot of other programs that don’t have that robust one-stop intake in technical assistance are about 7 percent. So that’s an interesting metric to follow.

How many other programs did an administrator enroll an owner in and that’s not the program that the administrator is overseeing. So I think Commissioner Peterman had asked about, you know, coordinating with electric vehicle programs so what about a goal or a metric for an energy efficiency program that also tracks how many owners that participated in your program also participated in electric vehicle programs.

There's a host of others and I'm happy to go through them but just want to emphasize overall the importance of goals and metrics.

And then lastly, this sort of falls in this category of providing market certainty. And so this isn't necessarily a goal, but knowing that there's going to be funds at least a couple of years out or that a program will be around for longer than a year at a time. Right now a lot of the multifamily programs in California are operating on one-year cycles or when they're newly launched, they run out of funding and it's unclear when they'll be restarted. So the low-income authorization program multifamily program that's available for disadvantaged communities right now, it's currently operating on a waitlist. And owners while they really like the program, they're not sure if it's going to be around and that reduces market certainty which also affects job development and the whole -- whole host of everything that goes with that.

So with those three areas, just want to emphasize again that there are solutions out there for all the barriers that been addressed and whether it's in California or other jurisdictions that this is really possible. And so I appreciate the increased focus on these issues and look forward to the discussion.

MS. GUERRA: Good morning, Commissioners, my name is -- thank you.

My name is Vanessa Guerra, I’m with Mutual Housing California. We’re a nonprofit affordable housing developer here in the Greater Sacramento area. We actually are very committed to building more sustainable housing and also upgrading our existing portfolio to be as energy efficient as possible. However, I just want to say that the largest barrier that we do face, of course, is the lack of funding to carry out this type of work. So it’s really important that we focus on finding programs and of course also being supportive of existing programs that are in place that are really helping us tackle this major barrier.

And so some of the recommendations that I wanted to talk about today actually touch on some of those programs that are in place right now and that Maria did mention that are really important to our ability to really try to capture as much funding or financing available to support these types of improvements for our properties.

The first one I’d like to talk about is the California Utility Allowance Calculator, the CUAC. This is something very important and critical to all of our developments, especially those that utilize low-income housing tax credits. That’s one of the biggest financing mechanisms that we use to develop our housing.

And so with that said, we definitely, we found that this is so important to all of our new construction where we’ve had experience on our latest development which is an all-electric 100 percent ZNE multifamily development in the city of Woodland. And of course that essentially allowed us to capture enough savings from the utilities, savings that the residents get in order for us to actually generate more net operating income from the rents that they contribute toward this property so that we can support a higher debt and essentially cover or help finance the costs of all of these additional upgrades that we included in this development.

However, the challenge that we’ve been facing with retrofits is that we can’t use it on these existing buildings. And not quite certain as to the real -- well, not the real, but not too certain on the actual barrier as to why we can’t really use them but from my understanding is that the Tax Credit Allocation Committee doesn’t have the resources to actually monitor this higher volume -- excuse me, this higher volume of developments that would be using the California Utility Allowance for their properties.

So I think it’s important that the CEC and the

California Tax -- Tax Credit Allocation Committee work together in trying to find ways to support that lack of resource that they need to really help us implement the CUAC for our retrofits because again the CUAC allows us to leverage hundreds of thousands of dollars that we can use to essentially cover the cost of these additional upgrades.

So another program that has been very useful as well but we've seen challenges with is the low-income weatherization program that essentially a lot of our properties weren't able to participate in because of certain barriers that were there. One of the biggest ones was essentially that this program was only targeting disadvan -- or properties that are in disadvantaged communities. And so that kind of -- although some of our properties did qualify, others, most were actually cut out so they weren't able to even apply.

And again going back to the funding need, higher rebates, of course, higher incentive levels because again there's such a lack of resources available within the property itself, its reserves are very limited so to be able to leverage more incentive would make it more feasible for us to actual do these kinds of upgrades to all of our existing properties.

Another thing with that program is the threshold requirements that really make it harder for these developments to do at least a smaller scale type of improvement. Having a threshold really kind of creates that barrier again for us to do at least small improvements to the properties. And by eliminating that and maybe making the program to be kind of more of an ongoing program where a property over the course of time not just within a certain period of let's say six months or a year have to do all of these major improvements, but over several years, it's an ongoing program where the properties can apply to, you know, replace one water heater at a time and that way it provides that property at least enough time. And at least it has the capacity and the financial resources to at least cover the smaller size types of developments over the course of time rather than just doing one big part or one big improvement that essentially most properties don't have the internal resources to handle.

So those are the only solutions that I have proposed for now but I'll give some more time to the rest of my colleagues here to talk about those more.

MR. PENNINGTON: Thanks, Vanessa.

Sophia.

MS. HARTKOPF: Great. Hi, there. My name is Sophia Hartkopf, I work with TRC Energy Services. We are a consulting firm that implements and designs multifamily programs around California and actually nationwide. I've been working in this industry for a little over 11 years trying to crack the split incentive issue that we all know is very real in the multifamily sector.

And I want to talk about a couple points. I don’t have as many overarching conclusions as -- or big conclusions that Maria has but I want to touch on a few that we’ve already discussed and reemphasize them. I’m sure I’m not going to be the last that’s going to be making the same points over and over again.

To build upon Vanessa’s comments about ensuring that the program meets the needs of the property, and also Maria’s, I think in general one of the solutions that I see is that programs should provide multiple opportunities for an owner to enter. It should not be a one size fits all solution of you must meet this qualification criteria and this percent improvement above your existing conditions, for example, in terms of your scope or, you know, this -- this number of years of since you’ve received the low-income program services but rather provide them with a menu of options and help steer them toward the option that makes the most sense to them. And part of that involves really thinking more strategically within the framework of our state programs and our utility programs of offering multiple options without overkill. There’s an issue, of course, offering too many options and making it confusing to the customer.

So one solution that we've seen with some of the programs that we administer is in PG&E's program we've been able to for example provide in incremental or phased approach so essentially allowing the owner to not have to do everything within a calendar year which is one of the key barriers that Maria and others have brought up currently that we face with one year, calendar year budgets. And it has been extremely successful in allowing owners to address upgrades in the common areas, for example, first, and then follow with tenant improvements either at turnover or at other key points without needing to disrupt the tenants the same way. And it allows them to phase their budgets and remedy some cash flow issues.

This program has been very limited, though, in terms of our funding so I think, you know, there's a real opportunity to expand this and to look at this and other programs as well.

With that, I'm going to move on to some other recommendations. So I think we're all going to echo the same point about technical assistance and the importance of that assistance. A lot of these owners are very motivated but don't necessarily to have the resources to really drive the decision making and make the best decisions as it relates to energy efficiency or other clean energy resources at their properties. And we can't necessarily assume that every owner needs the same type of technical assistance, so really needs to be customized to the needs of the owners. That may mean in some cases an ASHRAE Level 2 audit which we've all kind of agree is for the industry standard for whole building comprehensive retrofits may not be appropriate for an owner that's looking to do a lighter touch improvement. So allowing some flexibility and the types of technical assistance that we provide is also very important.

I think another key solution that I, you know, as an implementer and someone who runs these types of programs, you would think would be obvious but still something that we're constantly working on is making sure that there is a really transparent process that we can explain to the owner. Transparency is so important. Being able to explain up front each of the steps that you can expect, this is the rough time frame what it's going to take to get through these steps. These are the times we're going to be asking for the following forms from you. We're working right now to develop something similar for the low-income weatherization program which overall has been extremely successful at providing this level of support and giving owners, you know, a real sense of what the time frame is and the objectives. But there's still a lot of potential to improve how we communicate those steps and those processes.

Another area where I think -- and I see this as a real opportunity and it's still something we need to work on is ensuring that we have a real clear understanding of what the leveraging process will look like for leveraging multiple funding sources. So most affordable housing projects, deed restricted in particular, in order to make a retrofit happen of any scale are going to be are leveraging multiple sources of funding.

Typically, you know, the typical low-income weatherization project, for example, is going to be leveraging at least the Tax Credit Allocation TCAC program or the low-income tax credits. And likely also utility funding source or possibly a water district funding source. And, you know, we have some great procedures in place for how we can begin to segregate the influence of the different programs and how to best pull apart the savings, for example. But I think there needs to be a pol -- some policy thinking on this in terms of a policy framework of how we can make that sustainable. Because if we're competing for savings, which we're not yet, it -- we will really be having a tough time making some of these retrofits possible.

Another key solution is related to the way that we speak to the customers or speak to the multifamily building owners. What drives a traditional deed restricted affordable housing property like Vanessa’s is going to be very different than what drives a typical sort of market rate owner that has some low-income or predominantly low-income tenants inside of their property. In general we found for for-profit owners or owners that are overseeing non-deed restrictive properties, you really got to talk to them about their operating income and their vacancy rates and anything that drives the business end of their -- of their -- of their work.

And that’s not to say that you don’t have that same conversation with the affordable housing owners but they’re generally more driven to, you know, support their tenants, provide tenant comfort and also, of course, they are concerned, of course, about operating income as well.

Secondly as it relates to addressing the -- or targeting the different types of multifamily buildings that we see, we found an incredible success at -- for market rate sector really targeting those buildings at time of acquisition or sale. That’s when they have significant amount of funding that they’re getting from a bank or other sources and they’re really willing to make substantial improvements to the property.

But as a lot of us has already discussed so far, this is -- it’s a timing issue. So it’s dependent upon whether you can get that perfect window when either the property is being acquired or sold to make those retrofits within the time frame of the program. So that’s definitely still a challenge.

And then I’d also like to touch upon trade allies. So, you know, many of the programs have seen success in providing robust technical assistance sort of in-house where the program administrator really does the bulk of the heavy lifting on the front end in terms of establishing the energy savings. But I would also encourage us not to underestimate the power of trade allies in really driving program’s success and expanding savings. Trade allies such as contractors or consultants that serve building owners in other ways, either for tax credit purposes or for, you know, their other energy management needs are very driven to convince the owners to making improvements since of course it affects their bottom line. And if they are empowered and they have the right resources and the right -- and the program serves them appropriately, their -- they will drive the success of the program. On average, we’ve seen with our utility programs that roughly 50 percent of projects come in through trade allies.

And then I think I’m going to stop soon because I’m probably going too long. But lastly, I just want to touch on how to -- how we've seen success in combining program models. I spoke a little bit about how a lot of us work in whole building or comprehensive retrofits. But there's also a need for direct install or, you know, low-cost menu-based programs. And as an example, and this is not in California, but in New Mexico, we're working on a multifamily program where the owners have never -- had never seen an energy efficient program come to them before. And they were ultimately doing a direct install sort of a first step into -- into their buildings was a great entre into getting them interested in a deeper improvement over time.

So we found just doing a few free measures, assuming that they are well-installed and well-specified, and, you know, high-quality, have resulted in, you know, a longer term relationship with that owner that resulted in a deeper retrofit over time.

So I'm going to leave it at that. Thank you very much for the opportunity to speak.

MR. PENNINGTON: Thanks. Thanks a lot.

Nick.

MR. DIRR: Hi. My name is Nick Dirr, I work with the Association for Energy Affordability, AEA for short. We're a nonprofit technical assistance and program orientation firm, primarily focused on multifamily.

Currently we’re the implementer for the LIWA multifamily program in the state. We’re also implementing the barren multifamily program as well as the MCE multifamily program. We provide direct consulting services to building owners and the utility programs as well as within tax credits and for new construction Title 24 projects.

In general, I think I’ll touch on a lot of what’s already been mentioned and add a few new things as well. To second the comment around program timelines, that is really important for a number of reasons. You need longer program timelines especially for projects that are going through the major refinancing event. So we talked about that construction process may be happening 12 to 16 months. But even before then, there’s design development, financing, architect procurement, general contractor procurement, and so especially deed restricted multifamily building or market rate going under long timelines need to have that program confidence that it’s going to be there and the rebates are available.

And it’s also just important to get program momentum. So what we typically see in a lot of our programs is kind of people dip their toes into the program a bit, they bring in one or two projects, they want to see how it goes. After it goes really well, then they come back with two, three, four, five additional projects they want to take through the program. So as long as we can have longer programs there, then we can capture that momentum that's building within the market.

Secondly, I think in regards to addressing the split incentive, I mean, that's a major challenge and a major hurdle. We've tried a few different structures in the LIWA program that we've offered is that for end unit measures, the measures that are saving tenant energy, we offer 25 percent higher incentives than we do for measures that are saving energy. So we're trying to recognize that yes, that split incentive is there, we're willing to provide higher rebates to help that work happen.

In that program, we also do have a savings threshold. There definitely are challenges with that. And hopefully longer program timelines that allow for phasing can help maybe be a compromise. But what we find indirectly with buildings, especially the market rate folks, that maybe are trying to run a business and are not as focused as energy efficiency or maybe don't have an organizational energy efficiency goal. In that program, you have to achieve a certain energy savings over existing conditions, either 15 percent or 25 percent. So indirectly we end up encouraging folks to tackle measures within the units.

So it can get access to incentives for their common area measures, of their owner offset measures, potentially at an incentive rate that's higher than just standalone widget-based programs. But in order to do that, they also need to invest on the upgrades within the units. They end up getting there to that 15 or 25 percent threshold by packing all those measures together.

Also on the market rate side, it's talking to the owners again because they are running a business. So, you know, energy efficiency is important for them to get tenant retention and maybe attract higher rents. But that isn't ideal on a low-income framework. So then it's also targeting things such as reduced maintenance cost or incurred costs they're going to have in a few years. So explaining to them, you know, the furnaces that you have in these units right now, they're old already or they're going to be needing to be replaced in a few years, why not do it now with a program, do it with a higher efficiency furnace, get some rebates for it rather than waiting until it dies and you have to just replace it with the same thing that was there before.

And then I guess my final recommendation around recommendations for current programs and this one's kind of behind the scenes a bit at the policy level. So as the joint task group's agencies are coming together to recommend new programs going forward around low-income, traditionally there’s some policy requirements that make broad programs and programs that have a lot of depth of intervention challenging primarily around total resource cost, net gross, and what is being qualified as the baseline conditions whether that’s existing or are of code, so it’s very difficult to develop a program that is a deep energy savings program and can scale when you’re also trying to fit within a TRC framework or working with certain up to gross or baseline issues.

So as more broad longer term low-income multifamily programs are being developed, recognizing that there’s policy metrics and requirements are important would be really useful.

And I think that’s all I have for now. I know that was pretty quick so you made up some time. But I’m available to answer questions throughout.

MR. MCGOVERN-GARCIA: All right.

MR. PENNINGTON: Betsy. Thank you.

MR. MCGOVERN-GARCIA: Okay. Well, good morning, my name is Betsy McGovern-Garcia, I’m the director of Real Estate Development for Self Help Enterprises. And we are a nonprofit community-based organization. We’ve been around 50 years and we serve the San Joaquin valley, eight counties. We have 28 multifamily properties and that equates to 1300 units. All 1300 of our units serve low-income working families at or below 80 percent of area median income, and they're all deed restricted units.

I'd like to just thank you for the opportunity to be here. We're in the trenches currently implementing LIWP and new solar homes partnership and MASH and multifamily upgrade program projects and it's nice to have the opportunity to step back from those projects and just kind of reflect on what some of the challenges and successes have been under those programs.

All of our sites but one the tenant pays the utility bills so we have a tremendously challenging time accessing data. Also the majority of our sites are garden sale townhome apartments and so they're in fourplex and sixplex configurations. And so they don't always meet what people have in mind when they think of multifamily apartments, high-rises, more urban projects.

We recently completed about $4 million of LIWP upgrades at five of our sites. That equated to just under a megawatt of solar and an average energy reduction of 43 percent. 90 percent of that benefit on average went to our residents, and three of the five sites will be zero net energy. Two of them were done in conjunction with the re-syndication refinancing event and three of them were standalone upgrades. So we've got experience on both sides of the fence of using programs with refinancing or independent of refinancing.

In addressing Question Number 1, upgrades to deed restricted housing, I offer the following recommendations. Technical assistance. Have we heard this yet today a little bit?

Through the LIWP program, it was an amazing experience because the first thing that AEA did in implementing that program is that they came to our sites. They got out of their offices, they came to our sites, they counted our light bulbs, they looked at all of our HVAC units, they inspected our water heaters and how those systems functioned. And that afforded them the opportunity to make really thoughtful extensive recommendations on what we could do to conserve energy in those projects.

I can’t tell you how many times I’ve received a beautiful marketing flyer for an IOU operated program and I call and someone’s on the phone and they have no knowledge of my site, no ability to answer my questions because they’re in their office. And getting technical assistance where they come out, they inspect your sites, they work with you, tremendously, tremendously beneficial.

Secondly, investing in existing programs. Maria talked about program certainty. We plan our projects three to five years in advance and it will frequently take us three years to get the financing that we need. We’re sitting for, waiting for resources from programs like AB 693 to come down the pipeline. When we have existing programs that work, we have LIWP that works, we have the MASH program, the new solar homes partnership. All of these programs that we use and then the next year when we've had a successful project and we want to replicate that, we go back to apply and there's no resources and we're waitlisted. It's extremely frustrating for an affordable housing developer and operator and it makes it really, really challenging to plan for projects.

I'd like you to consider cash flow in conjunction with incentive programs. We had to front all of the money for the LIWP projects and so we were fronting. Right now we're carrying about $3.8 million worth of energy efficiency on our books. We're fortunate in that we've been a diligent nonprofit and we have the capability to do that and we've secured some funding from CPFI to offset those expenses, but not every organization has the ability or the willingness to do that. And so if you're looking for large meaningful upgrades that are costly, there needs to be some mechanism to fund those expenses upfront and not just on a reimbursement basis.

I think if you combine incentives that actually cover the majority of the cost for tenant loads in conjunction with really robust technical assistance, you're going to see nonprofits like ours that are focused on our working families implementing those types of retrofits. All five of our projects are in rural communities and rural disadvantaged communities. It’s one thing to be in a place like L.A. with 36 programs, it’s another thing to be in rural Wasco and Kern County and have maybe one program that gets funding, you know, maybe for two months and then it’s oversubscribed. And so if the state really wants to achieve broad statewide energy efficiency targets and outcomes, they need to continue focusing resources on rural communities and disadvantaged communities.

Just a bit about some current programs that we work under that are exciting and challenging at the same time. AB 802, we love. We wished that we had a portfolio manager count with data for all 1,347 units. We look at data to drive capital investments and we want access to that data. Unfortunately under AB 802, there’s the requirement that buildings be five units or larger so 95 percent of our portfolio we cannot get data for because they’re all fourplex units.

We want the ability to work with our IOUs to get that data. We want it aggregated. I don’t want to look at every single account. I want aggregated data for my sites so I know how to size solar, I know where to target my investments. I want to be able to identify my five most egregious energy users and direct investments towards those sites. So I'd urge you to look at data accessibility under AB 802 and provide a mechanism for us to aggregate our buildings to meet that five unit requirement.

Secondly, expanding the VNEM MASH tariff structure under LIWP because we were not receiving a MASH incentive, we were unable to use that tariff. It made it extremely, extremely challenging and we would not do this again. We had to basically install five mini solar systems that linked to different buildings and then allocate generation credits based on those mini systems within our larger site because we were not being VNEM MASH eligible. We need to have the ability to aggregate larger scale solar and then allocate the generation credits evenly over the site. If VNEM MASH was eligible for projects that are MASH eligible but just don't get the incentives because there's not money, we would have more flexibility under programs like LIWP and using low-income housing tax credits to aggregate that solar and implement more of those types of projects.

Finally, I'd like to urge you to look at making solar interconnection easier. I have a fully constructed solar system that's going to sit on one of our sites for probably five months accumulating a lot of dust but actually not generating any energy whatsoever because of interconnection. That system is about a $400,000 system and we're looking at spending $70,000 to interconnect that system which is 16.5 percent of that. Typically we've been able to interconnect through the utility pole section of the utility service panel, most pole sections have enough space for interconnection. However, in the last couple of years, utilities have been rejecting those interconnections and only allowing the line side tap to be in customer section of the panels.

If generation meters are required under VNEM MASH, then -- and the utility does not want the contractor to make connection in the utility section, then the utility should be required to provide the interconnection line side tap that we can connect into for interconnection at a fixed fee. Perfect example of this is the plug-in electric vehicle incentive structure that requires a new meter and that requires the IOU to provide that connection point for a fixed fee of a couple hundred dollars. Absolutely streamlines plug-in electric vehicle charger installation and makes those projects feasible and we would encourage you to look at a similar mechanism. Under VNEM MASH for qualified LIWP deed restricted-type projects to interconnect those systems easily.

And, finally the last thing that I want to say is our organization is also looking at plug-in electric vehicle rideshare so we're going to be participating in a couple of pilots hopefully through the ARB and CEC for deploying battery plug-in electric vehicles at our multifamily sites. The majority of which are in rural communities and allowing rideshare and ride sourcing opportunities for residents at no charge.

We're doing that in conjunction with the larger suite of transportation improvements through the affordable housing and sustainable communities program which is a greenhouse gas reduction fund program. Our goal is to have chargers on site that are charging plug-in electric vehicles that are powered by solar and our residents have an opportunity to take van pool to work during the day and share rides with their neighbors. Come home, swipe the same card, get in their plug electric vehicle, go get groceries, come home, be in an energy efficient unit that zero net energy because they also realize the benefit of solar.

So we're excited about that and we're excited that you're paving the way for that and I hope to be sitting in front of you a year from now telling you the successes and challenges in launching that also.

So thank you for having us today.

MR. PENNINGTON: So Mr. Chairman, we endeavor here to be succinct in our presentations and turn it over to you for comments, questions.

MR. WEISENMILLER: Great. Thank you. These turned out just a couple.

First, I was going to say at the beginning of this panel, Bill put up a list of an overview of the multifamily issues. One thing that I'd be interested to either now or obviously in your written comment if you could discuss that characterization, is there anything missing in that -- so go up. Yeah, this one. So anyway, if there is anything missing in this, it would be good to bring it up now or later.

Also I wanted to really thank Maria for reaching out. We had obviously as we were running through the barriers report, you know, the report talked a lot about split incentives and a lot about how, you know, many people in housing and we're trying to know what to do and she set up a group meeting for myself and Andrew to go and really pull together owners, occupants, and really lay the foundation for I think this workshop. And again what we're struggling with and we talked about split incentives for the last 40 years or so. But anyway trying to actually make some progress is what we're struggling to do at this point. So hopefully, this workshop is a basis for making further progress on this.

So let's just start with is there anything missing on this summary? And then I'll certainly ask my fellow -- my colleagues to sort of follow up on my questions.

MS. HARTKOPF: I guess I can add the time frame issue that we've been discussing is probably not here. So refinancing does not necessarily align with program budgets or budget -- fiscal budget planning for property, it doesn't always align with program budgets.

MS. MCGOVERN-GARCIA: And I don't see data on the list and access to data. I would say that's a huge challenge.

MS. STAMAS: I would add in terms of budgets, I mean, the tight budgets for owners but also tight budgets for multifamily programs at the state and customer funded level. We did a back of the envelope calculation and found that, you know, under generous assumptions, including the Energy Savings Assistance Program that was authorized but not out yet that less than 5 percent of overall funding is going to multifamily. So about 70 million a year out of 1.5 billion is going to the multifamily section. So there's not a lot of incentive funding or program funding available.

MS. HARTKOPF: And actually, this was Nick's point but the point about the cost effective this criteria that we're held to for some programs and not for others.

And the -- the constraints that we face with that especially for low-income programs and the need to consider some of the points that Maria brought up with regards to providing a mechanism for sharing projects across programs.

And I guess we could probably also talk about spillover and other, you know, these are classic issues that are being discussed at the regulatory way outside of the session. But, you know, we can’t run -- we can’t do market transformation under the current cost effectiveness criteria without getting a very low score.

MS. STAMAS: And just to emphasize that point or provide some examples. Even with so the Energy Savings Assistance Program has co-benefits or nonenergy benefits as part of the cost effectiveness calculation but it’s still based on the total resource cost test which includes as a cost the amount of funding that the owner invests in the property for the projects. So while we also want owners to have copays, the cost that the owner’s invest in their property is also considered a cost for the program. So that’s an example of how the cost effectiveness test can be a little bit overconstraining for the sector.

And then on spillover free ridership, for example, a lot of times, you know, we talk about aligning incentives with the tax cut allocation process and ensuring that while an owner’s accessing tax credits, they’re also able to leverage programs but oftentimes if an owner leverages a program with that tax credit as well, then it's considered that they're free riding and so the savings aren't counted. So, you know, there's details in the metrics and the cost effectiveness that bear a closer look.

MS. PETERMAN: Thank you very much for the presentations, very interesting. I have two questions.

The first is for Mr. Dirr. You mentioned that you provide a higher incentive when the savings accrue exclusively to the tenant. Once you add that higher incentive, what share of the actual project cost is then covered through incentives? And have you found and maybe Ms. McGovern-Garcia has a thought on this too about how much you need to really cover to incentivize the property owner to then make those improvements?

MR. DIRR: Sure. And it really is a case by case basis for a lot of these properties, especially the deed restricted properties. You know, some have available reserves that can -- should be funds. Other ones have been running in the red and need close to 100 percent financing for the project. Even with the 25 percent higher incentive for tenant savings measures, you're able to kind of go from the low hanging fruit to the medium height fruit, but things such as HVAC in particular, individual water heating, we're still only covering maybe 50 percent of the cost of those measures. But without that, we would be, you know, 25 percent, 30 percent of cost and that's just infeasible for a lot of these properties to be able to undertake that.

MS. PETERMAN: Thank you. And then my -- oh, please, ma'am. Please go ahead.

MS. MCGOVERN-GARCIA: Yeah, I would just say that, you know, on our projects that we were doing with a re-syndication, a refinancing event, that the incentives are probably covering 70 percent of that cost. We were only able to do those because we were refinancing and could offset that expensive through the low-income housing tax credits.

At some of our really old sites with really old equipment, the new upgrades yielded so much energy conservation that it was almost 100 percent coverage. I think if we see programs in the 90 to 100 percent incentive coverage range for tenant loads, we would do those projects all day long. Because AEA was able to provide such a high level of technical assistance, they helped us figure out what that meant, where the equipment was, who the vendors were all of those things. It was a no-brainer for us. But absolutely getting into that 90 to 100 percent range for tenant offloads is what really makes it feasible.

MS. PETERMAN: And just to clarify ON that, so that 90 to 100 percent includes the energy savings to the tenant as a part of that calculation?

MS. MCGOVERN-GARCIA: The tenant. Yeah.

MS. PETERMAN: Okay.

MS. MCGOVERN-GARCIA: And in some scenarios, the tenant offsets were 100 percent and maybe the common area ended up being 50 percent, but we were able to absorb -- we were able to finance through that through the cash flow of the project. And the combination of those two things together actually put together a really great project or a combination of incentives to make those projects feasible.

MS. PETERMAN: Thank you, and then I had just one follow-up question for you. So it seems that your organization has been able to take advantage of a variety of programs across energy efficiency and clean energy. And one of the comments made was the importance of having a more simplified set of interfaces to all these programs.

And so from -- how does your organization do it? Do you have one person that's following each program? Do you have a regular utility contact that's making you aware of everything? I mean, how have you been able to follow the different paths of money successfully?

MS. MCGOVERN-GARCIA: Yeah, it has been challenging and it has been hard for us. We don't have a dedicated staffer. We're housers, we're not environmentalists so we are houses, affordable housing. But usually it's on a case by case basis and we need those incentives to do solar, we need those incentives to achieve a higher level of energy efficiency. So we actively seek those out.

We had one scenario under the new solar homes partnership where we were in for one energy efficiency program that was required for the solar incentive and then they kicked us out because our community building was a commercial use and that energy efficiency program was only residential and so then we had to roll in a second energy efficiency program.

It has not been easy, it's a struggle every day to maneuver the different programs. If there was one clearinghouse or one ombudsman that knew all the programs that could help us facilitate that, we would be able to deploy those projects on a more larger scale. And so we just do our best to keep working at it and figuring out what the programs are and making them work for our projects, but it hasn't been an easy road.

MS. HARTKOPF: I don't know if this is directly relevant but a few years ago a number of folks at this table worked to develop a clearinghouse called the Funding Finder. It was funded through the ARRA stimulus package. It's no longer being updated but it might be something worth revisiting. It basically provided the owner with an option to put in some very basic property information and then it directed them to available programs through both state agencies and utilities and other sources. So doesn't help with the application process in terms of what taking the next step but at least being aware of what your options are was the intent. So that's something that maybe worth revisiting.

MR. RECHTSCHAFFEN: Can I ask, who administered that?

MS. HARTKOPF: It was through Stop Waste. But it was ultimately overseen by the Energy Commission during ARRA. I think the website's still there. I just don't know that it's actively updated anymore.

MR. WEINSENMILLER: Yeah, I was going to ask about energy update California. Does that help?

MS. HARTKOPF: It was energy --

MR. WEINSENMILLER: How could it help?

MS. HARTKOPF: But it was the multifamily page. It was the multifamily landing page.

MR. RECHTSCHAFFEN: Can I ask a question about the timing mismatch that all of you talked about. Is that a function of the fact that budgets are provided on a yearly basis or other program rules that say upgrades or activity has to occur within a calendar year or both?

MR. DIRR: I would say both. So state-funded programs are on a fiscal year basis and then the utility programs historically have been on a calendar year basis. I know that there's movement momentum towards the rowing portfolio which I think will help alleviate that. I think that's the intent.

So funding typically would be on a fiscal year or calendar year basis but then also programmatically the goals and targets would be on the same metric, the same time scale. So really just things start happening when you get to October, November, December and you try to figure out, okay, is it going to make the deadline, do we roll it into next year, do we try to complete it this year? And once we close out those books especially on the utility programs, you know, you have to do your quarterly reports and then your final program, your wrap up, that's just for the previous calendar year.

MS. HARTKOPF: I would agree with that.

MS. GUERRA: And I would also like to note that many of these funding resources are very competitive so there is the likelihood that we won't secure that funding within that fiscal year. So sometimes we need that flexibility to also allow to be participate in these other programs and to carry on until that funding is secure.

MR. RECHTSCHAFFEN: And I have another one quick last question.

Couple of you said we should target buildings at time of acquisition or sale, but what is that specifically mean for agencies running programs? What should we do? Maybe you can talk about it in your comments but we all know that but we don't know what -- how to facilitate, make that happen, provide incentives. What's the best way to really effectuate that?

MS. HARTKOPF: So I can -- this is a little bit old experience but during ARRA, I was running a program in Sacramento and I did a lot of outreach to major real estate brokers in the area that were doing multifamily sales and acquisitions. And building a relationship with them resulted in a lot of projects come in because they would basically talk to perspective owner or current owner and say there's this program that can provide substantial incentives for a retrofit. You're going to be making upgrades to make this property ready to rent again and it was -- it was a very effective way of driving participation.

MR. DIRR: And I would add I think what is exciting with AB 802 and the potential opportunities for disclosing energy use is that that will hopefully make some of those properties more attractive to prospective buyers. So the more that we can make that information readily available or even locally through local ordinances in regards to when that disclosure happens could help drive the market both for new purchaser acquisition or even at the rental level for folks that want to move into particular unit and know that their utility costs are going to be lower than the building across the street.

MR. MCALLISTER: I want to get to this data issue a little later, but I wanted to follow up on this particular issue. So buying and selling, that's one big transaction, but the rehab actually is also another big transaction. I wonder if you could talk about how that could be leveraged, you know, for buildings that don't change hands, but just have an investment and a repackaging going on, you know, that's only going to happen once or twice between now and 2050 for most buildings. So it seems like a good opportunity to leverage, but maybe you could talk about how that might happen.

MS. MCGOVERN-GARCIA: Yeah, so in our experience, it was the perfect combination of LIWP becoming available in conjunction with the time frame that we were resyndicating two of our buildings.

We went through and did kind of the normal suite of what we thought were robust energy efficiency and how to target budget to hit under the low-income housing tax credit program. But then our AEA the TA provider under a

LIWP came in and really looked at it with a fine-tooth comb and did a more in-depth analysis of if we increase the SEER rating or the glazing on the windows, the expense would be nominal but the energy efficiency yield would be larger. And so having that TA while you're designing your suite of rehab measures, because of the supplemental incentives under LIWP, we took a normal project that would've, you know, been energy efficient maybe at 15 percent or 20 percent under the tax credit program and were able to get that up to 56 percent.

And so for us, it was the combination of the technical assistance and site inspections, and that feedback on what our options were at the right time in conjunction with our rehab project. And I think really the sweet spot is once 9 percent competitive low-income housing tax credit projects get funded, they have 180 days to close that and do project implementation, and that's when they're really defining the final scope and the equipment specs and those types of things, working with projects that are funded through tax credits, through focused TA, I think is what made it successful for us.

MS. STAMAS: And I just add in terms of, you know, what can agencies do or how to help facilitate this, I think one is having programs that are flexible and so that they're able to adapt of maybe they don't have just a packaged list of measures, but they can adapt based on the technical assistance to an owner's project or at that time of refinancing. And I think it again gets back to timing, not to overlabor this, but if a program’s only around one year, then it's almost impossible to target a points of major rehabs or refinancing because those projects take longer than a year.

And then also, a free ridership. So if you are targeting an owner at a time when they're taking out tax credits, are the savings going to account or are they going to be diminished? So, you can -- a lot of these times where you're helping owners do a larger scope of project or saved, you know, double the amount of energy they would have saved, but how is that calculated and is it considered that the programs didn't actually help the owner achieve more savings or not. And so having some guarantees around that so that program administrators feel confident that they can provide that support to the owner, but not have the savings be diminished, is helpful.

MS. HARTKOPF: And I also think vice versa, as the states come out with programs, you know, look at what programs are already out there and what their criteria are and try not, you know, unless you have a strong reason to try to align some of those criteria so that you're not duplicating efforts.

As an example, you know, Tax Credit Allocation Committee has worked over a number of years to their sustainable building task group to develop the requirements for the energy efficiency requirements for the tax credit program to align as much as possible with the utility and state programs that are out there. It's not to say there aren't still nuances, but the intent at least is for those requirements to aligned.

MS. SCOTT: Hi. I would -- I have a few questions and thoughts here, as well. I just wanted to make note that as the lead on transportation for the Energy Commission as well, I'm really excited to hear about the packaging of some of these housing improvements together with the plug-in electric vehicles. I really like the vision you laid out with the solar and the vehicles and the van pools and the rideshares. I think kind of thinking about this as a whole in that way is really nice. And then on the flip side, we have to be careful that that doesn't then overcomplicate it such that we kind of get wrapped around the axle again. But I like thinking about that together in this way.

I had a thought for you all as you put your comments together, and thank you so much for your excellent panel and bringing your expertise to us here today, and to others who might want to provide comments to the commission. I think that we identified some barriers that, for example, like the definitions of units, so that it makes it really hard to get smaller buildings that are maybe four units or six units or eight units in size. We talked a little bit about definitions for some of the programs between a low-income community and a disadvantaged community and how that sometimes cuts out communities that we didn't mean to, that we actually are aiming for to include in the program.

And I know a lot of that ties back to the goals and the purposes of the various programs, and I'm just trying to think about how do we get at that. And some of that might require a statutory change, right, some of that might require a change in the regulation that the agency has developed to implement that. And so if you have, if you can flag for us where some of those things are, and just kind of make note of oh, gosh, this is going to need a statutory change, this will require Energy Commission to update a regulation, I think that will be really helpful for us as we're kind of thinking about how do we really jump in and put those solutions in place.

And then I had a question for you all about the technical assistance, which I heard loud and clear of course is very important. I'm thinking a little bit about our Prop 39 program, which included some technical assistance for the schools to be able to hire someone to come and help and look around the school and see what is it that's needed, and it's kind of the same theme, right? The administrator of the school is a very busy person, he or she may not have time to actually put together the application. And that was included within the funding of Prop 39. I'm wondering if of some of the technical assistance programs that you highlighted, how are those funded, or how would you envision us getting that technical assistance component into our programs as we go forward? That's a -- and so.

MR. PENNINGTON: So, could I amended that just a teensy [sic]. So what makes LIWP a work for technical assistance and the other programs not be like that?

MR. DIRR: LIWP as well as the barrier program and the MC program where we kind of do similar models, where the program implementation and the technical assistance is wrapped into one, one-stop shop, essentially. The technical assistance itself is included as part of the administration budget of that particular program.

MS. STAMAS: And, I don't know if this contributes or not, but LIWP isn't under the same cost effectiveness test and have other, yeah, EM&B challenges.

MR. DIRR: Yeah, LIWP, because it's not administered via the energy division, we have more flexibility around the total resource costs test, not to gross baseline electrification, those sorts of things that allow it to be a really useful testing ground for programs as a whole throughout the state.

MS. HARTKOPF: And then I -- I mean, I can speak from the utility prospective without saying that I am a utility representative. So with the caveat, most of those programs have taken a third-party model, where we utilize the existing Trade Ally Network that's serving tax credit projects, for example, that are doing the energy audits for tax credit programs, and they can submit the documentation to the program. And they still receive a rigorous amount of technical assistance, but the technical assistance is definitely not as comprehensive in the sense that the program implementer is not as engaged with doing the actual audit, developing the recommendations, they're just there to provide support and to augment what that third-party Trade Ally is putting together.

And we could probably argue about which model works better, but I see definite value in taking some of the burden off of the owner and having them basically just providing them with the recommendations rather than making them go out to hire somebody to do those recommendations. But, I'm going to -- I don't want to count on them that specifically, because I see value of both models.

MS. STAMAS: I think also having a neutral and trusted source for technical assistance, we've heard that a lot from owners of being able to -- if program -- not that programs are competing, but in some sense sometimes if the goals aren’t completely aligned or there's different metrics and each program has to meet their separate goals, then sometimes there is a certain amount of competition between the programs. And so having a third party that can say, this program is actually better for your needs or this program, you know, actually won't work for you, but it might work for someone else, but having someone that they can trust is also kind of critical. So I imagine the prop 39 technical assistance is also kind of -- has that trust component.

MS. SCOTT: Yeah, I mean, I was just thinking about it in terms of kind of the potential zero sum game that we may be playing where we've got programs that don't have enough money, they get over subscribed and then they end up with waitlists, but then the value of having had the technical assistance. And I think maybe Vanessa, it was you who mentioned that it's maybe $50 to $100 per unit in one of the buildings that you studied. And how do we kind of wrap our hands around, why you're really getting good bang for the buck when you spend it in this way even though if we end of with a cap, right, in the zero sum game, it's still a really valuable investment in that space.

MS. HARTKOPF: Yeah, I would agree. I mean, if we're still constrained by -- we're always going to be constrained by budgets and timelines, we can improve those, but having technical assistance throughout consistently helps a little bit with the lack or the challenge against momentum, because weightless stopping and starting programs is incredibly detrimental to the market and it creates a sense of apathy or just flat out, I don't want to do it again because it was too painful the first time. Having some consistent technical assistance throughout certainty alleviates some of that, it doesn't solve it, though.

MR. MCALLISTER: Great. So I just have a couple questions. I just want to congratulate all of you for the incredible work that you do. You know, those of us that have a little bit of background in low-income, I mean, we know how many of the challenges you face, so it's really, you know, way to go. And we want to help in any way that makes sense, obviously, which is why we are here.

And also, you know, Nick clearly, Nick you've hit a really, you know, AEA is hit a niche and obviously you're really good at it. I mean, I think we need to ramp up access to resources like yours, definitely.

So I guess I wanted to get back to Vanessa, you mentioned the CUAC and how important it can be to access better mortgage terms, higher limits on mortgages. That seems like it's not a zero sum game, it's actually liberating capital from the marketplace that otherwise would not come to those projects. So I guess, also, you know, Bill has a long history with this and I feel like we're in a position to do something, if we can figure out exactly what it is to get resources to the CUAC.

So, I guess, could you -- do you have anything other -- can you drill in a little bit on that? Like what you would recommend specifically for the CUAC, just make it more accessible and updated it or is there more to it?

MS. GUERRA: Yeah, well I think the main thing is making it more accessible, right? Because like I mentioned before, the CUAC right now is only accessible for those projects -- new construction projects that are using low-income housing tax credits, right --

MR. MCALLISTER: Uh-huh.

MS. GUERRA: -- because the Tax Fair Allocation Committee allows us to use that as the utility allowance which essentially allows us to reconfigure our rents so that we can have higher rents.

But, again, it's something that we can't use for retrofits and again, I'm not quite clear on what the rationale is for the Tax Fair Allocation Committee as why they don't -- they prefer not to or they can't. And so I think by having that on retrofits, again it gives us the same flexibility that we have on new construction to be able to leverage that additional funding that we need, or financing that we need to help with those costs.

MR. MCALLISTER: I mean, I see this might be related to the data issue that you brought up, but --

MS. MCGOVERN-GARCIA: Yeah, my understanding from the Tax Credit Allocation Committee was that they didn't have the expertise on staff to double check the calculations that are required to go into the CUAC because it is an engineered analysis of energy consumption that generates the utility allowance. And so some of that they were starting to farm out. But anytime you have a third-party review of an item that's required under TCAC, it extends their timelines, and so it was causing a programmatic backlog to where they weren't able to make their funding awards on time.

And so I think it's a conversation between one of your entities and the Tax Credit Allocation Committee if there were resources for an entity like AEA to come in and review the CUAC modeling in a timely fashion so they could stay on schedule for their awards, that would open up the opportunity for more applicants to use that tool.

We had one scenario under new construction where our utility allowances were $104 a unit under the HUD model, and with our energy efficiency, we were exceeding Title 24 by 20 percent, and our solar, we were able to get that down to about $30 a unit and that allowed us to leverage a $500,000 per loan to bring into the project which more than paid for the solar and the energy efficiency upgrade. So, I think it's a matter of getting that technical assistance to the Tax Credit Allocation Committee.

MR. MCALLISTER: Okay. So I'm going to have that as a takeaway, where we're going to -- we don't really have time right now, but let's dig into that and convene a little conversation to see what we can accomplish.

MS. HARTKOPF: And, I guess I would just add that I'm happy to follow up with Bill on that, because we are currently the technical assistance provider for TCAC, and we have raised this retrofit issue as the next step. But it's just -- it's, I don't, I think it's a budget issue, and so, we'll follow up on that.

MR. PENNINGTON: Yeah, the tools designed for newly constructed buildings --

MR. MCALLISTER: Yeah.

MR. PENNINGOTN: -- associated with NSHP, and kind of ran out of resources to go the next step and look at existing buildings.

MR. MCALLISTER: I'm sure there is -- there are issues that, you know -- it is more complicated with existing buildings, there's a lot of good data, you know, and sort of -- there's a lot going on --

MR. PENNINGTON: Right.

MR. MCALLISTER: -- with respect to giving certainty to the savings of an existing building --

MS. HARTKOPF: Yeah.

MR. MCALLISTER: -- project, so I think we could leverage that. But I don't really want to finish -- we don't have time to finish this conversation right now.

So I have a different question, sort of switching gears. Do any of you work in POU service territories, and if so, could you compare and contrast? Sort of a lot of our discussions have been around the IOU, you know, grandparent funded programs, but is there any special consideration, or differences in the -- are there any differences in the conversation with respect to POUs?

MS. HARTKOPF: Yeah, I can address that. So, there's definitely much more flexibility with POUs and they're not as driven by the same cost effectiveness and typical evaluation concerns that you might see from an IOU. But I think in general because they're smaller and also their focus hasn't been as much in the multifamily retrofit sector, at least not on comprehensive, they've always had great programs for low-income and some sort of prescriptive based menu rebates available.

I will say that I can say with certainty that entities like SMUD who tend to often, you know, lead the pack on energy-related issues are looking carefully at what they can do for multifamily retrofit, and likely, we will want to build something more off of an AB 802 benchmarking based program rather than, you know, driving participation just through audits and modeling. And hopefully, you know, SMUD and other utilities for that matter, and of course, I'm not SMUD, so I'm not speaking for SMUD, are more able to provide the kind of data that Betsy is asking for because they're not under necessarily the same constraints as the IOUs are under.

And I think LADWP, I mean that's an area that Maria can speak about that’s -- they have a lot of programs, they're just not necessarily focused on multifamily.

MS. STAMAS: Yeah, that's what I was going to bring up. And, you know, not being an expert on each individual publicly owned utility service territory, I think generally there's a lack of tailored programs for the multifamily sector and so we're doing a deep dive and a study on the market low-income housing market in Los Angeles, and what we've found is that there's a lot of available programs, but they’re measure focused, so like a refrigerator replacement program or a separate program for toilet replacement and so on. And so not having kind of a single multifamily intake or single multifamily program that an owner can go to and have easy access to a package of measures. So I think generally lack of tailored programs for the multifamily sector.

MS. HARTKOPF: And we do have a -- I did see a PUC representative today in the audience, so maybe they'll come up and speak and provide that feedback.

MR. MCALLISTER: They would be welcome do to so.

MS. HARTKOPF: Yeah, I think Maria's point is valid though, most of the POUs, you know, they have limited budgets and limited number of programs they can offer. Some multifamily typically falls either under their commercial or residential or both. So, they address them more on a custom basis.

Generally, I guess, that's something I can say for sure, you know, all the POUs are much more open to looking at individual projects, so if Vanessa were to come forward the project and it's SMUD territory and say this is what we're doing, you know, SMUD is much more likely to come up with a custom incentive for them than to try to roll out a program just because the scale isn't always there.

MS. STAMAS: Right. And that has been our experience here in SMUD. The only challenge that we have faced in POU -- or SMUD territory, POU territory, is the fact that we aren't able to gain that upfront capital or incentive like we do in IOU territories for solar. So, you know, in PG&E territory we're able to get huge incentives through new solar homes program, but unfortunately that isn't available in SMUD territory, so that's something that's been holding us back from being able to do that.

In addition, I've attended several workshops in the past about how we move forward in this territory to produce more solar for multifamily. And what I've heard from the utility company, SMUD, is that there's also concern about having their existing infrastructure support the type of virtual net metering type of setup that we usually do with multifamily to take advantage of solar type of incentives.

MR. WEISENMILLER: How about CCAs? Do they provide any help in --

MR. DIRR: Yeah, MCE does, MCE is currently a rate pair funded energy efficiency program, both from multifamily under electricity and gas savings, and then they're currently rolling out their low-income pilot, the LIFT pilot, which spun out of the separate seating. But, I think they're the only CCA currently that is administering they're rate pair funded programs.

MS. STAMAS: The LIFT pilot looks to be really innovative in terms of working with multiple efficiency programs and combining budgets behind the scenes to create a single package. The LIFT pilot by Marin Clean Energy.

MR. WEISENMILLER: Great. We’d like to -- would thank the panel and thank you very much.

MR. MCALLISTER: Thank you.

MS. STAMAS: Thank you.

MS. RAITT: Thank you. So that's great. We'll go ahead and -- thank you.

We'll go ahead and get setup for our next panel discussion on regional service delivery and crosscutting one-stop pilots. So, if our next panel could go ahead and come up to the tables.

Okay, so we're taking a short break, we'll be back in five minutes, I'm just letting folks on WebEx know we're taking a short break. Back in 5 minutes. Thanks.

(Off the record at 11:32 a.m.)

(On the record at 11:38 a.m.)

MS. RAITT: Go ahead and get started. And folks, go ahead and take your seats.

MR. WEISENMILLER: Okay, everyone, let’s start again. Encourage everyone at lunch to continue the conversations, but we’ve got a lot of ground to cover today. So let’s roll.

MS. RAITT: Okay so for this panel. We have a panel discussion on regional service delivery and crosscutting one-stop pilots, one-stop shop pilots. Excuse me. And Alana Mathews from Energy Commission is our moderator.

Thanks, Alana.

MS. MATHEWS: Thank you, Heather. And I'm waiting, yes, as we get our presentation up.

Welcome again. Glad to see that the first panel went well. It generated a lot of discussion. So now we're going to move on to our regional one-stop, our crosscutting one-stop pilots.

So joining us for this panel are representatives who have expertise from various perspectives including clean energy program providers, program delivery, organizations, online engagement, clean energy equity, and program policy development in the realm of clean energy and energy efficiency.

In alphabetical order, I'm going to introduce our panelist. Starting with Andrew Dugowson. He's a program manager in energy and environmental policy with Southern California Edison. His role is, he's part of a team with Edison focused on environmental justice for disadvantaged communities and low-income communities. And his team works both on individual proceedings but also have -- are engaged in a broader effort of building partnerships and incorporating environmental justice activities in the regular course of business.

We have Sekita Grant. She is part of the Greenlining Institute's Environmental Equity Team where she works to make energy and climate policies in California equitable and beneficial to communities of color. She comes to Greenlining from Business for Social Responsibility, a California nonprofit where she worked as a climate and energy sustainability consultant to large corporations. And prior to that, she was a policy advisor here at the Energy Commission and served as lead advisor for Chair Weisenmiller.

We also have Matt Perry who is the global business director for DDB, a global communications group with offices across the United States. Matt leads a team in the DDB San Francisco office responsible for the implementation of energy upgrade California which is a statewide energy efficiency awareness and behavior change strategy engaging Californian house holders and small businesses.

Next, we have Jason Wimbley. Currently he is the chief deputy director with the California Department of Community Services and Development. Mr. Wimbley possesses extensive experience in working with low-income communities, utility companies, and community-based organizations in an effort to better guide the implementation of CSD's energy programs as well as to build synergies existing between existing utility and local government energy programs serving low-income communities and individuals.

And last, but not least, we have Randall Winston who is executive director of the California Strategic Growth Counsel, a state agency that brings together multiple agencies and departments that supports sustainable communities emphasizing strong economies, social equity, and environmental stewardship.

And I am Alana Mathews, the public advisor for the California Energy Commission. And I was the initial project manager for the Barrier Study. So in the role I helped coordinate the research outline of issues and the community meeting for the Barrier Study which you heard Michael Sokol review in his presentation.

In those community meetings, a recurring concern was this sense of being lost with clean energy information by low-income customers. On the one hand, they've felt there was a lot of information that they – that they had that was out there that they didn't know about. And then on the other hand, those that did know about it felt overwhelmed by it.

And I do apologize. Next slide. So we introduced our next slide.

So that concern when we had our technical workshop, it was also reiterated by community business based organizations as well as program providers. So in an effort to resolve that concern or at least address it, we had Recommendation Number 8 which was a development of the one-stop shops. The state, in consultation with the Energy Commission, CPU, CARB, CST, and others related stayed in local agencies should establish a pilot program for multiple regional one-stop shops to provide technical assistance as we heard that's needed in a lot of instances to develop these programs, targeted outreach and funding services. And that will enable owners and tenants of low-income housing across California to implement energy efficiency, clean energy, zero admissions and near zero emission transportation infrastructure and water efficient upgrades in their buildings. So that's what our Recommendation Number 8 is.

Next slide, please.

And as I mentioned, what the community members share with us as well as the program providers and the community-based organizations that partner with the program providers really dialed into and said there is a need to access that information. And more importantly to streamline the access to information. But just as important as streamlining the access is how we distribute and package that information because we recognize the diversity of California itself, but especially within our low-income communities.

So we want to make sure that the one-stop shops are not just streamlining access, but we wanted to look at what is the structure that would ensure the regional one-stops are responsive to community members and not just accessible. So that's what we're going to kick off the conversation with, and I'm going to turn it over first to Sekita to ask her -- next slide please -- what would you recommend as a model structure for regional service delivery one-stop shops?

MS. GRANT: All right. Thank you. Thank you, Alana, for inviting me to be on the panel.

I, first of all, I would like to say that I don't think I could have selected a better starting lineup on the dais to lead California through these conversations. So I'm really excited to have all of you here to kind of guide us and ensure that we're successful in reaching our goals under these 350 studies.

So I'll go through some points. I can't say a few because I've noticed that I have about six here but I'll go through them briefly. So the most -- one of the most important things is really about finding local partners when we're looking at how to create a one-stop shop model. So ensuring that you have a local partner that is resourced to do this work and that you're operating through that local partner. And these local partners should have established relationships within communities and establish channels of communication.

So this is really how we can ensure that we're meeting communities where they are as opposed to kind of creating some type of a separate model that communities then have to adjust to. And what's going to happen is that they're not going to adjust to it and it's going to be not used or useful, the investments.

The second piece which is very related is that as we're creating agenda -- an agenda for what each regional one-stop shop will accomplish, this agenda has to be community driven. So that means that the communities have -- or are at the table and have a say in terms of what the priority projects are within the scope of the one-stop shop. They're deciding what the priority funding streams and what the different outreach strategies are.

So really it's maybe kind of a governance issue but ensuring that the communities are at the table in terms of determining how the one-stop shop will be operated. And I'll speak a little bit more to that later.

Another important piece, I think, as the state is looking to do something that is inherently to be successful, very regional and local, but doing it from kind of this statewide lens is really about communication. And really stressing the importance of multidirectional communication. So that means both, you know, when you have a regional technical assistance center that there is effective by directional communication with the state so it's not just top down. But, you know, there's a lot of opportunity and there should be the ability for communities to teach the state and to help us learn how we should be operating our clean energy and climate programs. So that's an important communication stream as well as across regional centers so across host.

There's a lot to be learned, a lot of resources that are going to come out of any investments to kind of target technical assistance. And so I think the state could play a very powerful role in terms of kind of leveraging resources amongst different regional partners.

So the fourth thing and I didn't come up with this term. Bricks and clicks is something that I think is really cool. And so, you know, it's really just discussion around are we looking at some type of a physical center located within a community and/or are we looking at more of an online presence? And I think, you know, my sense is that both are needed. However, I want to add more importantly, it has to be specific to the region. So some regions might not want or need an actual brick and mortar location for this. And we don't want to invest, it's costly to have that space and then it not be used and useful. And in some communities perhaps the online presence isn't as important. So I think it becomes important, you know, going back to earlier points around communication, having a community-driven agenda then you have a clear sense of, you know, depending on the region, what is the best strategy when you're looking at bricks and clicks.

The other big thing is tracking and transparency. So really, you know, having, you know, understanding the importance of having a baseline data and I know we're going to talk a little bit more about indicators in this panel I think later in the day. But really having, you know, tracking data from, you know, what's happening with these one-stop shops and just being transparent about it.

Which leads me to my last point which is that we do not have to get this perfect right at the gate. I've been spending more and more time in private sector conversations in Silicon Valley, and the venture capital world and e-startups, and folks have learned how to commoditize failure. So I think that it's been kind of an interesting experience but coming from also working at the state, I think that there's room for the state to -- to be maybe less conservative in some of these new projects. And that there's opportunities to, you know, just it's about starting small maybe, you know, starting with a few pilots starting out. I think I'm a big fan of adaptive management so as long as you have the data, you have the transparency and we're always checking in. We can always make adjustments moving forward to ensure that we're hitting our targets. And I think that was a great point that was made in the last panel.

Yeah, so I'll stop there. Those are some of the criteria. I know other folks are going to bring in some really great points and actual concrete examples of how this can be successful.

MS. MATHEWS: That's a nice segue for Jason. If you could share with us some concrete examples of what CSD's regional delivery model and maybe some key lessons that you've learned for success.

MR. WIMBLEY: Certainly. So CSD administers the state's low-income weatherization program that was covered extensively by the first panel. And then we also administer the federal low-income home energy assistance block grant. And the Department of Energy weatherization the assistance program.

CSD traditionally works with community-based organizations to carry out the administration of those grants locally. And there are two examples of program administration and service delivery that I believe possesses the qualities that align with the one-stop objectives of providing information and resources to low-income communities.

The first one is the low-income weatherization program multifamily program, that was covered extensively. The department, you know, applied the learnings from our first attempt the launching a multifamily program that occurred with the stimulus funds that were received. And even though we didn't achieve much success in being able to provide those resources, you know, to the housing segment, we applied the learnings from that program to basically influence the design of the program that we have in current -- in present day, at the present.

And through that experience, we have assembled a state administrator that places a great deal of emphasis on technical assistance which was a feature of the program that was definitely embraced by the market and received many kudos today. As well as we wanted the administrator to be in the position to have at least conversant on all the various programs, resources that are available to multifamily to enable those funding resources to come together to provide the most comprehensive form of financing, you know, for multifamily building upgrades for energy efficiency and solar.

So with -- with that model, we even right now it’s statewide -- it’s not statewide, but it’s focused on disadvantaged communities and the program has been able to enroll approximately 40 projects based on the amount of funding that, you know, we currently have. It’s identified projects in 16 of the 29 counties that contain disadvantaged communities. But you certainly can see that this program is definitely scalable and can serve as a one-stop for addressing the needs of multifamily. It’s under the current program design. Property owners can come to one location to receive not only the valuable services that an AEA and its team are able to, you know, able to provide. But in addition, the property owner’s needs can be best served by having the resources that have been accumulated by the AEA team to provide, you know, services to all multifamily property owners, you know, throughout the state.

As I mentioned before, I believe that the program definitely is scalable, but for purposes of the one-stop pilot recommendation, I think this multifamily program is ideal and should be one that should be considered for a pilot or a demonstration project going forward.

In addition, I believe that when you look at low-income housing, you know, we have design strategies that address the low-income housing segment of multifamily and single family. And when you look at the single family, the state's largest program resources that are available to address single family, you know, housing needs are the programs that CSD administer as well as the investor-owned ESA program which is an energy savings assistance program. And CSE has been engaged with the IOUs and CPC to look at ways that we can build a stronger synergy and better program coordination between those two programs.

And in -- and in 2014 CSD, CPC, and PG&E conducted a pilot study, you know, to design, test, and evaluate a joint weatherization program model to better serve low-income customer energy needs. And this program model sought to capitalize an administrator efficiency and service improvements to low-income customers where the IOU ESA program and CST weatherization programs are administered by the same organization locally. And generally speaking, in most cases, they operate independent of one another in most areas.

And the advantages that you gain from that that the dual administrators are advantaged by having access to program databases systems that are trained and knowledgeable on the various programs. And the best position to leverage the resources in the way to, you know, to improve the offerings to low-income customers. As well as the loss for better utilization of the resources that they have in their control.

When the -- even though the pilot was limited in the scale and focus, it -- what it did identify that there are definitely some benefits that can be gained when you look at strategies of combining these resources to target certain customer segments or geographic regional areas. And that can result from the lining of benefits and administration that occurred locally.

And since the objective of the one-stop is to improve the delivery of information of resources to low-income communities, I think the learnings from the geographic coordination should illustrate the potential for this, you know, administration model to be possibly considered for a pilot going forward.

In addition, advantages that we identified through this method of local administration is that it provided, you know, opportunities to streamline access to the programs. So currently understanding that these two programs are distinct and separate, individuals that need to access those programs have to apply to each program to receive the benefits and offerings that those programs have to offer. You know, with this dual administration model that we tested in this pilot, you know, there was a single intake where an individual applied, you know, at one time and was able to receive the full benefits and offerings that these programs could deliver on.

In addition, there was benefits in how efficiencies gained in the delivery of services in the sense that we could control and limit the number of visits to a home, to a target property to deliver the offerings of these programs. And understanding that the ESA and the federal weatherization programs serve as the state's largest program resources for improving energy efficiency of low-income housing, I think the designs for the one-stop shop should, you know, build this into the fact these resources into the equation as we go forward, we're looking at potential models and designs.

MS. MATHEWS: Andrew, I know you're going to talk about Valley Clean Air Now a little bit later, but did you have another program that could possibly shed some light on a regional model that's been successful with SCE?

MR. DUGOWSON: Absolutely. First, I'd like to say thank you for both hosting this workshop and for the opportunity in the invitation to speak. Really appreciate it.

This is a very important topic to Edison. I know this is understood but worth repeating. I think 50 percent of the disadvantage communities within California lie within our service territory. Of our residential customers, I believe 40 percent either reside within a disadvantaged community or are on an income qualified rate. And so developing a sustainable scalable solution is necessary both to reach our climate goals, but also to ensure as Commissioner Rechtschaffen said that we can prepare and manage affordability for our customers moving forward.

And finally one more prefatory response, remark before I get to your question. In thinking about what a one-stop shop means, it’s -- we think of it not as like a single topic but rather as a collection of heterogeneous approaches kind of under this broad umbrella of streamline -- of coordinating different programs both within the utility and then also coordinating with other outside programs. And then also this access targeted outreach, and I like that term responsiveness.

So I can give two quick examples. The first, and I mention now disadvantaged communities. I’m about to talk about Irvine. There’s the Irvine Ranch Water District. We’ve worked with a combination of SoCal Gas, SCE, and Edison Gas, Irvine Ranch Water District, to develop a common combined one-stop shop for residents in that local area. It’s an online portal people can fill in basic information about where they live, whether they have a pool -- a pool, pool pump, basic information about their residence. And based on that survey, a contractor will be sent out to their house trained in all of these programs and can administer, implement all of those services at once. And so this is a model that is very locally tailored to these services and it has a single contractor trained in multiple services which can really streamline access and create some efficiencies there of building off of what Jason said.

If you don’t mind if we have a sec, I’d like to contrast this to the actually Valley Clean Air Now approach because I think it builds on this, but if we’re constrained for time I can punt it till later.

MS. MATHEWS: Sure.

MR. DUGOWSON: So there’s this second organization with whom we are really happy to partner. It’s an organization called Valley Clean Air Now. The administrator for the Enhanced Fleet Modernization Program in the San Joaquin valley. This -- they have a flagship program called Tune in and Tune Out which travels up and down the San Joaquin valley. And, excuse me, will run an event on the weekend where customers who have a -- can receive a free smog check or indicative smog check. And customers who fail that smog check if they’re income qualified can receive a voucher for repairs to reduce the emissions that come from their vehicle.

So you're asking why Edison's interested in this. Well there's a small swath of their territory that overlaps with our customers. But what's important here is this series of events consistently brings out 500 customers who are really interested in both cleaning up their car but also prepared to receive services, so there's this group or pool of customers who are already very likely eligible for many of the services we can provide. And so Edison can travel out to these events, enroll customers and care. And also we've brought out one of our contractors who provides acts of services and also certified for several state services as well.

And so building off this excellent events and establish an in-community outreach much like Sekita has talked about, we can work and build off of these events to really target and have a high retention. And, what's the word, many people will take the programs. I don't have a word for that.

And so I want to contrast these two and really highlight the point that Sekita made which is these are two different programs, that are very regionally tailored, but they both rely on having this clear idea of what services the customer can receive and then also having this technology or screen to understand what services the customer’s eligible for. I think those both are instrumental for the success of the programs.

MS. MATHEWS: Thank you. So that is definitely reiterating kind of how we want to have this comprehensive approach. And as mentioned earlier about bricks and clicks, that’s looking at a brick and mortar building but also that online presence.

So, Matt, I’d like you to share a little bit for us about how this model can have effective online engagement. Especially since we know that a lot of low-income customers the way they’re going to access the digital world is through their telephone. So when we even think about online engagement, we need to think about a platform that is accessible from a mobile device.

MR. PERRY: Yeah, thank you very much for the opportunity to speak today as well.

I think the starting point from my perspective is that Energy Upgrade California is a statewide campaign which is a little different to some of the regional campaigns that some of you are working on. It does talk to all Californians so again we have multiple audiences that we need to connect with and engage with. So that sort of if you’d like means that we need to develop a broad message both in advertising terms but also we need to build digital platforms, social media platforms, et cetera, that can talk to multiple audiences in an effective way.

However, low-income audiences hard to reach are absolutely top of mind and critical components to our strategy. Was -- we're in early days as well so we've -- I think the campaign is, the new campaign that we've just relaunched has went live less than a month ago so unfortunately I don't have lots of data to share with you today.

But I did take a dipstick look at, sort of a snapshot look at what's been happening so far. And it's interesting actually in social media particularly what we see is, what we're seeing at least and we need to drill into this, is that low-income, by that, I mean, you know, people on less than 40,000, 30,000, 25,000 dollars as defined by their online profiles actually overindexes in some of the data that we're seeing from the outbound paid media in social channels. So it's kind of interesting that low-income people potentially are reflected in some of the successes that we're seeing early on.

Now we have to be careful because of see young people are also often lower income people. That said, I look at age profiles as well and interestingly older people overindex in the social results. So it says interesting that we sort of think that maybe potentially digital channels may be not necessarily the most effective at giving to these hard to reach audiences or potentially low-income audiences. But it looks like, you know, the world is shifted to the point now where this technology and these platforms are now accessible by many.

Taking a step back is what I thought it would be just worth referencing some of the work that we did in our last segmentation of our sort of California-wide audience. And so we found in that the attitudes towards energy efficiency and energy behavior wasn't really defined by income or political allegiance or geography. There are actually those things really cut across all of our segments we ended up identifying five core segments that flowed from highly active, highly engaged people all the way through to people why are a little more skeptical. But it didn't really matter whether you are low income or high income, your attitude towards energy actually is really determined by other factors. So your willingness to create an outcome for the greater good versus your willingness to create an outcome for your back pocket. And so really those are the kind of the two defining kind of attributes or characteristics or motivations for the California population when it comes to energy efficiency.

So, again, I think that gives us lots of room to play in many communications and we talked a little bit earlier on about joining up communications with activations on the ground. I think there’s a lot of work to be done, not just looking at sort of digital versus the real world, or online and offline, but actually a much more integrated approach so that where CSE may be doing something with a local community, how can Energy Upgrade California integrate into that or work with you in a cohesive way? I think if we look at it from the holistic perspective we’ll have a better outcome.

MS. MATHEWS: I think that an integrated approach is key for some of our remote communities as well. And I do notice on their website the Energy Upgrade California there are multiple languages on their website and that’s a good example of how we want to be inclusive in our programs and responsive to the community.

Next slide or next question.

We’re going to move to the second segment of the panel which is to discuss how can we best leverage funding and coordinate statewide low-income disadvantaged community reaching our outreach activities. I think the examples, Jason, that you provided were very informative of how we can expand services as well as maybe offset costs when we’re able to do that.

So I’m going to turn to you first. Again, if you can share a little bit more about the existing programs and how we can leverage that to achieve those two goals.

MR. WIMBLEY: So under CST's programs as I previously mentioned, we work exclusively with profit and nonprofit and public community-based organizations. And like most community-based organizations, these organizations tend to be multifaceted and offer a broader range of social and economic services that could be made available to low-income and disadvantaged clients.

And strategies that we've incorporated into our program to build upon the capabilities of these organizations include improve workforce development and objectives where by leveraging the relationships that these organizations have with workforce development boards, financial resources and partnerships to provide an array of job training and education and employment services for low-income individuals and disadvantaged residents is a leverage feature of our programs. You know, now we're just not focused on energy, we're focused on some of these complimentary benefits that can be gained from services.

In addition, we leverage our federal resources and utility and rebates and incentives to look at ways that we can offset the costs for energy improvements. And in some cases, we look at directing our federal dollars that may have a little bit more flexibility to address the health, comfort, and safety needs that are kind of a component part of improving the energy efficiency of low-income housing.

In addition, we place a strategic focus on leveraging utility rebates for solar. Where we know that these are generous rebates but oftentimes there is a financial divide, you know, that's or a gap that most low-income individuals face that they can't take the incentives and combine it with resources to acquire the solar systems, so we use our dollars as bridge funds, you know, to make, you know, to complete the financing and provide opportunities for low-income communities and individuals to gain the advantages of renewable energy.

Also, would like to emphasize that in some of our -- in many cases, the community-based organizations that we work with are also involved in important social service programs like TANF, Cal Works, WIC, which in many cases individuals, low-income individuals that come to our program for assistance, generally are, you know, looking to have their home weatherized. You know, they're usually dealing with a more pressing financial crisis in their home whether their utility bills have been disconnected or their utility services have been disconnected, they're having difficulty paying their utility bills or there's some other crisis in the home and they're reaching out to these organizations to, you know, to acquire services and assistance. And through that interaction with that client, they discover that there’s a need for energy services and some other, you know, social service benefits that they can provide and they take the opportunity to do that.

And then also something that was probably wasn’t emphasized enough in our -- in the first panel discussion with the LIWP program, but it’s -- this is a component part of the technical assistance, and that is we definitely try to encourage property owners and, you know, to look at all funding sources, resources that are available to them and to utilize those resources, you know, to make the energy efficiency improvements to their buildings. And as a result, we have seen projects that, you know, have received significant upgrades, you know, and involve a diverse financing mechanisms or diverse funding, you know, funding sources to contribute to these projects.

The benefits of that is that it allows us, you know, to extend the use of our cap and trade investments, you know, to do more projects. And, you know, without those funding resources, we know coming from other areas, we definitely would have had probably a more limited output of projects that we would have experienced or accomplished with the program.

MS. MATHEWS: And, Randall, can you just chime in and talk about the leveraging of multiple or the components and partnership with the transformative climate communities?

MR. WINSTON: Sure. And thank you again, Alana, for inviting me to the panel. And to the panel.

So SGC just by way of the quick introduction administers a number of the state’s cap and trade programs, focus on affordable housing and transit, land, agriculture, and conservation. And then more recently, kind of a suite of new programs. First a pilot effort offering technical assistance to disadvantaged communities for affordable housing and transit program. And then new cross GGRF program-wide technical assistance program. And then as Alana mentioned, a new program looking to invest in a much more integrated fashion in the most disadvantaged parts of California, called transformative climate communities.

We’ve been kind of thinking through I think this issue both of leveraging funding opportunities and tying together the variety of technical assistance efforts for some time. I wanted to maybe just touch upon three things in response to your question. One, on this pilot TA program effort lessons learned that we’re bringing now to a DGF program-wide technical assistance effort and then more specifically on transformative climate communities. So at a high level just over the past year for our housing, affordable housing and transit program, our technical assistance project -- pilot, excuse me, was regional focusing in on Southern California, the Central Valley and the Bay Area, and just with about 60 of the disadvantage community applicants who were unsuccessful in the first round.

I mention it because it is sort of -- we sort of put together a format for how we approached the type of assistance that we were offering to applicants. One on partnership development, so the types of entities including developers, local governments, community-based organizations, financing entities who are applying for our affordable housing and transit program. Two, project development. So when you're talking about a specific project and the components that that would entail a bit more technical in nature. And then finally, direct technical assistance. So when you have an entity ready to apply to a program, conducting the GHE quantification and other elements.

Now we're bringing that to assist effort across the various DGF administering agencies including CSD's program and working closely with Jason on that. And we're finding that it's definitely challenging. It is much more difficult to be able to, from the perspective of programs run by different departments with different applications processes and different ways of engaging with communities to piece all of that together. And I think that's why it's important and really thankful for the conversation that we're having now.

Now at TCC, Transformative Climate Communities, we're letting multi-stakeholder teams really define a vision for transformation. That will include a place-based approach rather than a programmatic approach. So rather than being a little bit proscriptive around what we're asking for from specific projects, allowing communities and stakeholders on the ground to define what those projects are that in turn meet our state's climate goals. We've got $140 million for that program looking to invest in, again, the most disadvantaged parts of the state, Fresno and Los Angeles and a third community that we'll still determine.

One thing directly I think by way of leveraging funds is in specifically this effort, is requiring it. So we do require at least in our advice guidelines now for the program a 50 percent match for the funds that will be granted to the awardees. But with that, we recognize that substantial technical assistance and support will be needed. We're talking about the most, again, the most disadvantaged parts of the state. And so we really are drawing from the lessons that I mentioned in the earlier -- the earlier points.

So a few things specifically out of TCC that we're honing in on by way of leveraging funding. As you could imagine, there's a host of existing efforts already underway in these places with regard to foundations, other community-based organizations looking at ways to better assist communities on the ground. We formed a roundtable with foundations across the state that includes specific technical assistance and support opportunities that build off of their effort. And that's sort of parallel to that kind of tripartite components that I listed earlier on partnership and project development and technical assistance.

Specifically with workforce development and training, we're looking to partner with California community colleges, specifically with Fresno Community College first to partner or sorry to pilot a workforce development component that would link career technical education, pre-apprenticeship and apprenticeship programs to whomever would and to be available to whomever would be the recipient of the grantee both from Fresno and L.A.

And then finally with financing, working directly with the infrastructure bank and the treasurer's office to also make available financing mechanisms focused on infrastructure and community solar. And, again, we're intending to sort of bake these directly into the guidelines for our program and so it's not just the case that we want to, you know, award funds to entities and walk away. But through the life of the, you know, 70 million or $35 million investment five to ten years be able to work with those recipients. And in order to ensure we get the most -- the most bang for our buck out of the invested -- investment that we make.

So I’ll stop there.

MS. MATHEWS: Are there any recent developments that any of you are aware of in existing programs or proposed programs that would help inform these efforts specifically to leverage funding?

MR. WIMBLEY: I can speak to most recently the department would -- we issued an RFP to initiate the launch of our Phase II for our, you know, LIWP weatherization program. And in that solicitation, you know, we, you know, we were intentional in ensuring that we put some strategic emphasis in, you know, in critical areas.

One of those areas, you know, where there are several areas but I’ll touch on -- I’ll touch on those now. You know, one is on the workforce development. We wanted to make sure that for the funding opportunities that we’re making available, that organizations could come forward with strong plans and objectives for workforce development. So, again, many of these proposals that we received outline different strategies for how they could accomplish that.

In some cases they were performing direct hires or they impose requirements on subcontractors to, you know, to hire from local communities, as well as they were forming relationships or leveraging existing relationships workforce investment boards and other federal training programs to provide training and employment opportunities, you know, to -- to individuals.

In addition, the cap and trade dollars has some limitations on its use and that the dollars are specifically, you know, earmarked for, you know, with GHE reduction. So when you look at weatherization, we understand that, you know, in many stakeholder meetings that we had that weatherization means a lot more than just energy to low-income individuals in their communities. You know, they want to ensure that we had workforce development. We also make sure that we address all of the housing needs that are identified in the course of delivering services.

And then -- and then many cases these organizations had, you know, responded on putting together resource plans or cumulating resources that could be positioned to address the variety of needs that come along, that go along with energy. For example, Rooftop Solar, it seems like it’s a perfect solution when you have the money and the funding available to install a rooftop system, but in many cases, homes that we encounter have dilapidated roofs and you need resources, you know, to make those roof repairs in order for the solar systems to be installed.

So organizations have come forward with, you know, strategies on how to provide, you know, major, you know, home innovations or repair to allow energy efficiency and renewable energy investments to take hold.

In addition, there are other issues that we encounter in running into homes, you know, where homes that have environmental hazards, you know, attach them whether it's, you know, lead-based paint, or mold remediation or whatnot. And rather than just deferring those homes, you know, these organizations are really looking at ways to address those needs and using other resources so these homes can receive the benefits of energy efficiency upgrades and solar. So those are just a couple of strategies.

MS. MATHEWS: Thank you. So we're going to have one last question that I just like you all to address very briefly so that we can have time for a little bit for the day as to ask questions.

Next slide please.

If we can talk about metrics very quickly. So we've talked about what the model structure should look like. How we can leverage funds to create this model for one-stop shop. But lastly, just if you can share maybe one metric that you think is key for us to ensure that we maintain the success and measure our success for these one-stop shops.

MR. WIMBLEY: So for the one-stop shops, we’ve talked about, you know, what the objectives of the one-stop, you know, shop for to serve. And, for me, I think there are three items that we need to track. One is the ability, you know, the partnerships that these regional one-stops can represent and bring to the regional communities to best address the regional needs. Two, it’s looking at the availing of resources that these regional one-stop shops can amass and provide to the local community to address their various needs.

And then also there should be metrics to measure the reach that these regional one-stops have in serving the community. And, you know, and then within those communities, there could be, you know, specific targets that we may want to emphasize given resources and opportunity. But there should be metrics to evaluate the performance and the ability of those regional one-stops to, you know, hit those marks.

MS. MATHEWS: And, Sekita, I know that you probably have some metrics.

MS. GRANT: Yeah. So I think, you know, the

Energy Commission, LADWP, there's already been some really great work digging into looking in to these equity indicators and metrics. I want to -- I just want to make the point that there is, I think, room for there to be a regionalized approach to the -- to creating metrics. We should have regions and communities defining what success looks like for them. So understating there's going to be some common across the board, across the state metrics, but there all should be -- also should be opportunities for states to really kind of hone in on what the full suite of metrics looks like in their region. So, I guess I've got to pick one. Is that -- okay.

MS. MATHEWS: Two.

MS. GRANT: I guess I -- I mean, I think the jobs pieces we're looking at broader economic impacts, looking at access to job training and to actual access to jobs themselves is really important.

Could I make a point on the last question?

MS. MATHEWS: Go ahead.

MS. GRANT: Okay. So I just wanted to say really quickly on the financing, I think the state has an opportunity to somewhat show our cards right now with what's moving with clean energy investments. And there's a lot of uncertainty in the capital but I think there's a lot of -- there are a lot of programs that are very certain.

And so to attract that private capital to have the state be very clear and transparent about what's moving, kind of create a one-stop shop I guess for the private sector to see what's moving in terms of clean energy investments and bring them to the table and have them respond and identify opportunities to co-finance and participate in the market.

MR. WINSTON: So we're also at SGC developing a host of indicators and metrics for transformative climate communities and working with a staffer at the CEC, Mr. Corey's staff over at ARB and co-benefits. But if I just had one to add, I actually would throw in leadership development.

MS. MATHEWS: Which would fall under community capacity development.

All right. Matt, did you have any metrics for how we can measure our effective online engagement?

MR. PERRY: There's multiple measures, obviously, online. We've defined two metrics that we want to keep a close eye on with most objectives underneath each one. The first is awareness obviously because we're in the essentially in the communication game. So we need to build awareness of our program and build awareness of the messages within that program. And then critically important is intention, so the ability to survey our audience and see how we're shifting people's intention to take action on energy efficiency is the other kind of key metric that we're focusing on and we'll be tracking over the next few years.

MS. MATHEWS: Thank you. With that, I'll turn it over to the chair.

MR. WEISENMILLER: Yes. I want to thank everyone for participating this afternoon.

I think the thing I'm struggling with is this recommendation really came out from what we heard from the community is that first of all, all of us have our little programs and obviously people are trying not to say here is this ASH or here is the ARFVTP event, but something which really pulls it all together. And at the same time, people looking for, you know, credibility in the community. You know, in terms of who were they -- who were they really going to listen to when someone says, yeah, you should participate in this program. Probably not going to be state bureaucrat frankly.

So, again, how do we move forward and this has to be crosscutting in a way because it's going to take a lot to pull this off. But, you know, it's like we have to pull on which should, you know, just all these programs into something that really works. And at the same time, I was really interested meeting with Ron Nichols when he was saying 40 percent that, you know, that disadvantaged communities in the Edison service territory. So that seems like ground zero to really focus this sort of activity at least on a pilot effort activity launching.

So looking for people's ideas of how do we really start moving this along? Where's the funding source? You know, where do, you know, what should be the priorities on location, you know, in terms of really getting this going and the types of communities groups who really need to engage with?

MS. GRANT: Yeah, I think you're pointing to some really great kind of challenges and opportunities. I think one thing I go back to is that we can -- I feel very comfortable with and I think that we can start small so we can identify, you know, what are the priority areas and do the legwork to build the partnerships to work within the communities to understand priorities. And I think, you know, building in a good, you know, understanding of the data and baseline data and also, you know, carrying a principle around adaptive management so that we can make changes moving forward. But I think starting small is key.

And in terms of funding -- yeah, I'm in the capital lot. We're working on that, too, but I think again it becomes, I think we're all working really hard to bring in other sources of capital other than GGRF and to look how -- look at how without, you know, giving too much heartburn to folks but how to be effectively rate pair money and how to effectively leverage federal funds and private funding as well. I think there's a lot of untapped private funding out there.

I was recently at an event where I was with some folks that are in the venture capital world, there's a lot of private funding there for technology and they were blown away when I was presenting on all the great programs that the state has invested in, they had no idea that this state was -- when California is all in on something, that's a big deal, you know, for the private sector. I don't think people realize how all in we are. So I think there's some opportunity there on the funding side.

MR. RECHTSCHAFFEN: Maybe Sekita or Randall, what's the right size affordable housing sustainable communities was regionally, your TA was regionally focused. Sekita, you talked about having a community driven if we're starting a few of these I guess part of it depends if it's bricks or clicks. If it's -- if it's virtual, it may be easier to do it statewide, but what should we do?

MR. WINSTON: So maybe I can start with that and Sekita, feel free to add on.

So, you know, we -- we had as you mentioned through our technical assistance pilot a focus on just three reasons but really using Cal Enviro screen and kind of the what we -- where we knew to be the greatest cluster of the most disadvantaged communities as a starting point. We work with entities who had a regional reach. So in Southern California, that was the Southern California Association of Governments. And the Central Valley, that was the San Joaquin council of governments. And then the Bay Area, that was ELP advisors and they in turn subcontracted with community-based organizations who had more specific expertise. And those really seemed as a pilot fact by way of example.

I want to throw out just another example and kind of an ethic apparel effort underway right now that has a lot of similarities with this concept and that's legislation that Senator Leyva has authored 263 looking to establish climate assistance centers. Again, in a model that shares a lot of similarities with the recommendation here. That legislation points to ten regional centers. I think that that might be a bit too many if we were sort of just pilot effort, that's just my opinion, but I think anywhere between three to five as an initial effort I do kind of would echo Sekita's point on making sure we get kind of the fine-tuning of regional differences right. The Central Valley is not the, you know, the southern coast, which is not the [indiscernible] each share, I think, specific chall -- or have different challenges that would be worth I think taking some time, really thinking, thinking through both in terms of just what actually funded and more importantly approach from the community or community-based organizations who make up the, you know, let's say regional -- regional-based organization.

If you want to add.

MS. GRANT: No, that sounds right. I think maybe I'd add just really starting with the communities we're seeing or the regions we're seeing the least adoption rates we're seeing, you know, the least capital flow to them, the least amount of participation in these programs that we want to see scaled. And start there.

I mean, in terms of size, you know, it's hard to call it because, you know, part of this is really going to be dictated by what funding is available and where it comes from. And that, you know, that money's -- you know, wherever it comes from might have restrictions but I think really starting with those communities that, you know, we haven't been successful in reaching to date. And again, I think, you know, ideally you have within maybe an initial three, you have some diversity within those areas. So maybe see what can move in the suburb -- or excuse me, urban contacts versus rural.

But, yeah, I think these are important questions to ask and there's opportunity for us to kind of start small with it and really target those areas that have not been reached with these programs.

MR. WEISENMILLER: Andrew, what's your sense on how many centers you would need in the Edison service territory to make this work?

MR. DUGOWSON: So the first question is we have regional focus or centers, what -- what are we trying to accomplish with the physical center too. We have one of the points I wanted to bring up with the illustrating the online shop versus the events that travel throughout a territory is maybe something that's a traveling event allows us to target or be more adaptive in reaching out to specific locations, where the online event is available to a service territory.

So this is kind of a roundabout way of saying I'm not sure but I think that as we want to be crystal clear about what we want to do with the regional physical location and see which alternative to pilot as well.

MR. WEISENMILLER: Does Edison start billing centers in the community? Does Edison still have community billing centers? Payment centers?

MR. DUGOWSON: I believe we have several. I'll confirm that and submit that in our comments but I don't want to --

MR. WEISENMILLER: Yeah, I was just trying to figure out they could become at least a brick broader stuff.

MR. DUGOWSON: It’s a good point. Thank you.

[Inaudible comment from the audience]

MR. DUGOWSON: Thank you.

MS. SCOTT: Yeah, I like the -- the, Andrew, the valley can example that you came up with and I’m wondering if there are other organizations and events like that that are already kind of out there that are ongoing where people are open to the idea of not just transportation but energy efficiency, renewable energy that we could -- and not now -- that we could brainstorm together that you guys could provide for us in your comments so that in some places we’re not recreating the wheel, there might just be a perfect place to jump on and say hey, can we talk about this also.

So I thought that was an intriguing example that you highlighted for us and I’ll bet that there are some really good ones like that around the state.

MR. DUGOWSON: And I would love to partner, so anyone who would like to join us, please reach out to us.

MS. MATHEWS: The resource of the community action networks, I know CSD you all work with them and perhaps we can even expand it to schools and churches and the networks that they have outside of just energy efficiency programs to reach those hard to reach or those who have not been participating in programs.

MR. COREY: I had a follow-up question. I think it’s for Mr. Winston.

It’s -- I’m really intrigued by the transformative climate community. I just think that sounds like a platform. My real question, though, is is it a platform for integrating some of the range of programs that we were just talking about. It’s really the chair, the question Chair Weisenmiller asked. So was, I’m interested in the -- at the status implementation just an example kind of projects that you’re seeing --

MR. WINSTON: Uh-huh.

MR. COREY: -- and the degree of even oversubscription. I’m just trying to get a sense of is this really going to present an opportunity to link some of these issues that we’re talking about here.

MR. WINSTON: So. Great question. Thank you for the question, Mr. Corey.

I’d say yes, I do think that, you know, TCC could serve as a platform for integrating not just our pro -- some of these programs we’ve been talking about but I think some of the outreach efforts.

I want to, though, maybe touch a little bit squarely upon one of the challenges to providing technical assistance and capacity building. You know, and this is stating the obvious, but when you're, you know, talking about providing assistance in low-income disadvantaged communities where you have historical disadvantage and, you know, entities that openly disagree, local governments, community-based organizations, then it really calls into question, okay, what's the role of the state in such a center and navigating, you know, deep-seated historical issues that, you know, we're coming in at it right from a certain perspective and, you know, kind of launching in the midst of what's maybe divisions that have taken place for some time.

But let me offer a specific example to your question. So Fresno is a great example where just in the past eight or so months that the TCC has been kind of approved and we've been developing the program, we've seen a tremendous amount of entities, foundations, private institutions, of course the city government come forth and trying to build bridges between I think -- divisions between downtown north Fresno, southwest, west Fresno where you've got, you know, very real concerns around communities who've felt left out in some of the growth that's happened there. So we are directly taking part and helping to bridge some of those gaps.

Again, in Fresno they formed a 30-member steering committee some of the local elected officials there and entities who, you know, are representative each of the parts of the city. Now we aren't -- we aren't preselecting any winners, it's going to be a competitive process, but I actually think even before the selection of projects and rather than just sort of saying assistance as sort of okay, let's give assistance to give essentially a handout for -- and that's maybe not being fair, a fair term, but just showing folks how to apply. We're really finding ourselves engaged in process design. What is a collaborative stakeholder process look like in forming a much more holistic vision for community?

And I think outreach and the assistance actually could be put in that light. So it's not just about the single one off projects but it's sort of let's just take a step back and architect the structure. I'm talking about direct memorandum of understanding between community groups and government institutions and other entities to map out the life of investments, climate investments and other investments to achieve, you know, the climate outcomes that we want to achieve.

And the state I think absolutely has a role to play in that when you're talking about, you know, communities where you have such levels with historic disadvantage.

I'm not sure if that's getting at your question, but I do think that it's -- it's been promising.

MS. GUZMAN ACEVES: Thank you. You know, looking at some of our statewide goals and hearing, it seems like there's a couple of pieces that were kind of maybe need a little more focus on. One is really thinking through more intentionally around transportation electrification where that's kind of been.

We don't have as much historical community organizations that like have the historical programs like LIHEAP and all of that that we got to catch up on that end. And some of our more robust programs are not community oriented.

So I think it'd be good to kind of focus adhere attention to and, you know, everyone obviously has a role to play in that, the applications that are before us and really yielding some benefit with this concept of coordination amongst different entities and regionally focusing them.

And I would just say for when we look at one area of investing in disadvantaged communities and we look at the other area which we've talked a little less about which is alleviation of pollution and where that intersection lies, may have to have a little more state-driven data at least to inform the communities of -- it's perhaps there are certain regions where more high-end investments, certain types of transportation, electrification should be a real priority. I mean, there really are areas of the state where maybe we should be piloting things first.

And interestingly also, on the generation side, you know, we're hitting this point where we saw a really high number I think it was like 87 percent this past week where -- 85 of GHG free AGHG free grid. And what we -- perhaps there's a regional focus to really look at where, you know, that fossil fuel is still being generated and where the local generation in disadvantaged communities will have an even greater benefit. And perhaps the question is should we focus really focus on that as a pilot versus, you know, community solar that certainly is greater than 85 percent but, you know, maybe not because they're still off the -- they're still dependent on the grid, the other part of the knife.

So just for things for us to think about in terms of, you know, pooling resources to really maximize also the pollution alleviation side and definitely there's no loss in investing across the board but is there that additional co-benefit.

MS. GRANT: Thank you, Commissioner. I think, yeah, those are great points.

And two things that come to mind, the first is kind of this, you know, theme around meeting people where they are in the communities and the health concerns are critical and so as you were speaking, I'm recalling as, you know, participating Environmental Justice Advisory Committee with the Air Resources Board and we have a lot of community meetings that are really centered around health, around pollution. And every -- and I've been in the transportation, I lead the transportation group throughout those meetings and there's also folks asking about electric vehicles and charging stations. These issues are linked for folks to access to the clean technologies as well as the pollution that's burning their community. So I think, yeah, I think that's absolutely correct that as we're, you know, moving forward these conversations that we keep that top of mind.

And another thing that came to mind in terms of where we're kind of focusing this technical assistance that there's an added benefit as well kind of in this conversation around just transitions to the extent that we're looking to reduce pollution in areas, we're looking to possibly in some cases scale down production of things in certain areas in order to reduce that pollution, what are the economic -- what are the industries that remain, are creating jobs and access to economic benefits within those same communities. And to the extent that we're more intentional, I think in bringing clean energy markets into more heavily polluted communities, I think is just, yeah, just to double tap, I think it’s a strategy that we should be keeping the top of our mind.

MR. WEISENMILLER: Great. Done now.

MS. RAITT: Okay. So I think we’re going to take our break. We’ll be back at 1:30. Okay. Back at 1:30.

MR. WEISENMILLER: Great. Thanks.

(Off the record at 12:45 p.m.)

(On the record at 1:35 p.m.)

MS. RAITT: This afternoon we’re starting with two presentations on better use of data to benefit low-income customers. And first is Pam Doughman from the Energy Commission.

MS. DOUGHMAN: Hi. So, my name is Pamela Doughman. I’m an advisor to Chair Weisenmiller, and we have recently posted online a draft staff paper presenting some ideas for framework and indicators to measure our progress implementing the Barriers Report.

So, this framework -- this report presents a framework and a set of indicators, and the framework discusses objectives basically rolling up the recommendations in the barrier study to three key objectives: to expand access, increase investment, and improve resiliency.

And by access, we mean expand access to product selection, good jobs, small business contracting opportunities, and nondebt financing.

By increasing investment, we mean increasing investment in buildings, research demonstrations, infrastructure, emergency preparedness, and capacity building.

By resiliency, we mean improving energy reliability, energy affordability, health and safety.

And as was mentioned in some of the earlier panels today, it's very important to recognize local conditions and priorities affect challenges facing communities and these differ across California. So, this draft set of indicators includes geospatial indicators, including regional economic dynamics, climate zones including climate change, different risks related to climate change, based on geographic location, population density, whether we're talking about rural or urban community, local resources, public health, whether the community already is facing environmental stressors, air quality challenges, and also CalEnviroScreen, whether communities in a disadvantage -- as designated as a disadvantage community by the CalEnviroScreen.

So, there initially we have proposed a set of 12 draft indicators and these are performance indicators.

Starting with -- I've got the indicator listed on the left, and then how each indicator contributes to the objective, whether it's the access, investment resiliency objective.

So, we have energy savings, the number of households and small businesses served, renewable energy, small business contracts, workforce and small business development, jobs including the number and quality, and job access. And, then, the indicators, five through seven, are measures of capacity building -- that investment incapacity building. And, then, we have the amount invested by a building older -- building owner and others, the outage duration, energy affordability, as measured by the electricity bills, proportion of income, health and safety issues abated, and critical facilities with resilient self-generation. Meaning that if the power goes out in the surrounding area, the renewable energy that's located at the critical facility, will continue to generate.

And these are an initial set of ideas to help spark further conversation about how can we leverage existing indicators to measure our progress towards achieving the recommendations in the SB50 Barriers Report.

So, how can these indicators be revised to improve measurement of clean energy access, investment and resiliency for California's low income communities and disadvantage communities? How can these indicators best leverage existing equity indicators and data, which agency organization, or program administrator should take the lead for each indicator? And how can local priorities be most effectively integrated into these indicators?

So, with that, I'd like to turn the microphone over to John Chen from Los Angeles Department of Water and Power.

MS. RAITT: Next is John Chen form the Los Angeles Department of Water and Power.

MR. CHEN: Good afternoon, chairman and commissioner. Thank you very much for the opportunity to present at this workshop. Today I'm going to talk about equity that Department of Water and Power has developed during the past year.

In August of 2016, the Department of Water and Power commissioners, with the support of our general manager, has approved a resolution which established Los Angeles Department of Water and Powers equity matrix daily initiative. And our commissioner, Bill Thunderberg, (phonetic) was spearheading and leading that effort.

And the purpose and the goal of the indicators are to provide policymakers, program managers, with data to access how well program services resource investment are distributed and utilized. For the equity matrix, there are four core categories that was established. We spent about six months in conducting outreach events to solicit inputs from community and business stakeholders. After several rounds of feedback and revisions, we came up with 15 matrixes which are, again, here under the four-category: infrastructure, customer incentive programs, procurement, and employment. Many of those equity indicators are mentioned in the framework. So today I'm going to show you some of the matrix that was established and also the lesson learned implementing those equity matrix.

One of the things mentioned in the framework was the SADE, to track it, the SADE. We did that too. When we initially started looking at the CDC the reliability, power reliability numbers. The information we had was for six district because that's how we tracking internally. The data was quite interesting. We find out, for example, like the West L.A., even though it's a nice area, but the reliability was not as good as we thought.

But that's just one example how we would be able to -- we are able to visually see the, I guess, reliability throughout the City of Los Angeles. But the committee members, especially council members, had mentioned to us that this is a great chart. However, we don't know what really is happening in our area. The area, geographic area that's covered is too large. So, we said, okay, let's examine the possibility of narrowing down to census track.

This is what we did in the course of about three, four months with the assistance of a lot of the programmers. And we were able to identify the city number for each of the census track areas.

In order to accomplish that, we increase our data gathering points from 10,000 to over 1 million data points. So that's the magnitude of effort that has been put to drawdown to a more detail level.

A lot has talked about the CalEnviroScreen. We actually took that, the poverty level map, and we duplicate it and we use as a background to some of our matrixes. So, for example, low-income program, you know, on the back is the low-income area distribution with the different color codes, and we also show what's the participation level for those areas on this particular map.

To be able to show the program, you know, with some visual assistance is been very helpful. For example, the rain barrel water tank rebate. As you can all see, there's some pockets of concentration of rebates that's been distributed.

So, that begs the question next is: why is all concentrated on those area? Was it because the marketing effort, was it because of the economic conditions, or were there other factors that determine. So, you ask us to basically explore more and looking to more how can we do better with this program.

So far, I've mentioned a couple of issues. It's always quite easy on the surface to try to map those informations. But as we dove deeper, we ran into some issues. For example, the [indiscernible] data, you know, from 10K to 1 million that's one example for the city. But addresses, even between the city, county, UPS, USPS the addresses not really consistent all the time. So, when you try to geocode it, it may give you a lot of error rate.

Early in the morning a lot, you know, has been talked about the multifamily housing, the four unit versus the five units or higher. So, the question comes: who really has the data for all the buildings that has the accurate apartment numbers? Is it Bureau and Safety, is it Bureau and Engineering, or is it Housing Department, or is it Department of Water and Power, or is it everyone is doing their thing and should we get together and really compare notes and maybe save some efforts. So, that's the type of question when you come down to the ground level that we're faced with.

So, I'll just give you a little flavor of what we have encountered. And I'm sure as, you know, as the framework gets implemented many of you may be faced with the same issues.

Community Solar. We have -- sorry, it should be

2000 to 2015. This is a chart showing the per capita solar incentive receipt for residential customers. As you can see from this chart on the left-hand, upper-hand, that's the valley, it's very hot in the summer, there's a lot of rebates probably given to those areas. But at the same time, you can also see there's pockets, especially down south, East L.A. side of it, all the way down to San Pedro, Wilmington on the bottom of the chart, there's a lot more that can be done to provide the incentives to those communities.

So, the program managers are looking at it. It's not the only criteria for giving out the incentives, but we think it should be one of the many criteria should be considered for all programs.

Same thing, electric vehicle. This is a graph of all the rebates that were given on electric vehicle from 2011 to 2016. I think the graph is very telling because there's a gap. There's a gap onto the, you know, certain section of the map where it's not very well covered. And I believe just recently our board has met asking what would it take to increase the amount of actual rebate that we have given out by five times, and how can we distribute it so that all areas will be able to receive equitably across the board.

So, all this graph is very fascinating, it's pretty to look at, and it's great for the community for transparency wise. However, internally in order to have this as a long-term engagement for the institutions, we need to make sure that there's a lot of buying within the company too.

So, this dashboard is really targeted for the operating managers. So, on this there are four or five section basically describe the background purpose, achievement milestones, performance, there's target, so how you're doing against a target, and then there's a mitigation plan or recommendations.

On top, we have clearly identified the responsible manager. As a matter of fact, you can see the signature of that responsible manager, they have to sign it when they submit this report. And we have a very clear definition of what this matrix is for and we identify exactly the source of the data so that nobody else comes in and just decides to change the data.

For all the programs that we're pushing out, we are asking people to identify the qualifying criteria on this one page chart. The other thing, a lot of talking about how do you market? How do you do the outreach work? So, we ask them, the managers common area to talk about what's in marketing channel? What's your ultimate goal? And then sometimes you may have the information; sometimes you don’t. What is the penetration level on target market?

And for a lot of infrastructure, a transformer and other things, you may not have a penetration level but you have a replacement cycle time. So, if the, let’s say, we do 5,000 replacement transformers. Is that a good number or is bad number? It depends. It depends if you just have 100,000 transformers to replace versus a million.

So, this is another chart for the cable. And earlier I talk about, you know, the purpose of equity matrix is really just adding one component to the various criteria we look at in prioritization -- to prioritize our work. For example, for the mainline replacement, right here, you can see there are at least eight different criteria already existing. Leaks, material, pressure, age, diameter, elevation, soil, collusiveness, hillside. Those are all the things that they already looking at. But by looking at the map, we can see, you know, how -- where’s the most trouble areas are. And you can vaguely see the blue lines, those are the lines that we -- indicates what we will be doing for the next three years in terms of mainline replacement projects.

This is another one for the dashboard. This is an example of, I guess, a rebate program, this is our commercial direct install program. It has been very successful for the Los Angeles area [indiscernible] for the past probably ten years. We basically go to a small business, go do assessment on their needs, and then as integrate approach we just go ahead and replace whatever is necessary in terms of water conservation or energy efficiency. In this graph, it shows the zip code, the number of cases we've done for that zip code, but at the same time we can easily convert that into dollars. How much the program dollars has been invested in those zip code? Or we can do, you know, if it's not business, if it's, let's say, residential program, we can easily identify the per capita that's been received for those areas. Those have been called out for by the framework. So, this is just an example of one of the things that we have already been doing.

So, lastly. So, what we talked about is the external maps and the internal dashboard to make it complete. We talk about dollar versus number. One of the other things that we have triggered since almost a year we started this effort. We started an audit of our process, the internal and external audit. We're asking third party to audit our entire, I guess, process of generating those matrixes. So, we want to make sure that, you know, those data source are accurate, the methodology are uniform across the board. And because we possibly can be publishing this information on annual basis.

Data format. There's so much data. Try to recreate from scratch it will take you years to get it done. Many of them I don't think there is a system you can just automatically pull information from. Some of them involve spreadsheets still. But, I think, the key goal is that get something going and, you know, we'll try to automate everything. But a lot of times, I would say majority of times you cannot automate because it's still labor process.

Frequency of data collection. We don't actually report this information on a monthly basis. We report on quarterly basis and semi-annually to a board to reallocate. But we collect the data on a monthly basis because we want everyone getting into habit of submitting the information and the senior management team actually have meetings every month to go through those numbers, to go through those charts. So, it's a very engaged process.

The system platform. We are currently using the Oracle business intelligence platform as well as the Esri software.

So that's the conclusion of my presentation. Any questions?

Thank you very much.

MR. WEISENMILER: I was just going to ask the type of community involvement you had in development under these?

MR. CHEN: So, we actually held a, I think it was at least two or three events at our office. We invited each, I think, outreach event we had over 70 people from various organizations. Some of those organizations are testifying here, earlier in the day. We talk to them. We have private meetings with them also. And we setup e-mail account that people can just submit information, their questions onto the specific e-mail account. So that it's a process we went through for almost six months before we decided what to present finally, you know, getting approval from the board.

MR. RECHTSCHAFFEN: I was going to suggest to Pam for the indicators that you're drafting and working on. One nice thing about LAWP's approach is they have it broken -- the matrix broken down to specific programs as well and not just at high level, like renewables or energy savings. I don't know if we're considering -- I think it might be worthwhile for us to do something similar. Look at zero emission vehicle rebates or households participating, that received incentive under the California Solar Initiative Project or Net Energy Metering so we can get it at that program level as well.

MS. DOUGHMAN: Yes, that's what we had in mind but then we wanted to roll up the programs to a higher level but have both levels of information.

MR. CHEN: Thank you, again.

MR. MCALLISTER: I just had one more question actually. So, are you, I guess, what’s the analytical kind of eco system that you’ve put together for this? Are you using people out there in the community, UCLA or others or is it really all this happening in-house at DWP or what is the nuts and bolts of this execution here to put together this resource?

MR. CHEN: Fortunately, we have a lot a institutions, academic institutions in the area. We have engaged at least with a couple of them to help us assist in providing additional information or suggestion. We also have RP that’s going out pretty soon to select partner -- select academic institution partner to help us to review some of our internal data to make it robust. For example, you can increase some of the planning department information, the demographics, other crime stats, there’s a lot of things that added to this. So, this is only the beginning. We have the geo map that’s the first phase. The second phase is the dashboard, so it makes it more complete, then on top of that there’s overlay of background maps. The mayor’s office has already -- they have a hub called GeoHub. They took that information and published it in, you know, via Esri into the website. So, people can go in and play with it. They can create their own maps, underlay additional information on top of it.

So, the whole point is that we just wanted to push the data out and let the community use the data for their own purposes and they have already done some of that.

MS. ACEVES: At what level is the dashboard implemented at? Is that, you know, just managers doing that on a monthly or how many folks do you have actually utilizing that?

MR. CHEN: I think initially, I think, it look a while for people to understand the importance of it and we had to kind of just ask. Because a lot of people now very much involved, from the manager to all the people that provided data. I'm sure the manager also is also using the information to have the meeting with the staff to make sure that certain goals are met.

Because if you look at the -- for example, look at this chart, there's blue and there's green. But there are times where it can become red and yellow. So, when that happens the manager not only reporting that but also getting together with the staff, talk about how do we share resources, how do we get additional contract.

So, I think it's a top -- but it's been used companywide now. So, the entire company -- maybe we have about 60 of those matrix, 60, 70. But that encompasses every major operation of initial active that we have at the Department of Water and Power.

MR. WEISENMILLER: As you were setting this up, did you know -- did you see if any other utilities in the country have this type of [indiscernible]?

MR. CHEN: I think I -- I just came back from D.C. conference. I see a lot of people using data for various things. But in terms of equity matrix, no, I have not seen any.

MR. WEISENMILLER: Okay. Thanks.

MS. RAITT: Thank you. So, we'll move on to our panel on strategies for Clean Energy Labor and Workforce Development. So, if the panelist could go ahead and take seats at the tables in the front here.

And the moderator is Sara White from the California Workforce Development Board.

MS. WHITE: Well, good afternoon everyone. This is a little bit of a weird setup because I'm facing you and talking to commissioners and the panel is over there. So, we'll try and pull it all together.

I'm Sara White. I'm the deputy director for equity climate jobs at the California Workforce Development Board and the labor agencies point person on energy and equity.

Thanks so much for having us this afternoon and having a panel that I think will be useful and enlightening for everyone. My job here today really is to remind everyone of what the workforce recommendations are that are in the barrier studies. So, I'll throw up a couple of slides on that and then run a panel discussion on people who are thinking and working about these issues on the ground. But before that I'm going to talk for about ten minutes just to give you a sort of high level framework on how workforce development can actually deliver equity because it's not guaranteed. All right. We call for jobs, we call for training, but you have to do this very intentionally to get the outcomes you want. So, we'll talk a little bit about what's important for that.

Let's see. So, today my understanding was that we're talking primarily about the energy commission recommendations. But I put both of them up here because it seems to me that certainly in the workforce, jobs and training area, we are talking about the same set of issues and we need a workforce strategy that addresses these simultaneously. All right.

So, I'm not going to read to you this all. I threw up some of the language from the studies so that we can go back and refer to it if people want to do that during the course of the conversation. Both sets, both the transportation and the energy recommendations organized by the CEC on the one hand and CARB in the other, hope to maximize economic opportunity for disadvantage communities; right? And the CEC ones, a little bit more process oriented. they define a process for implementation planning that involves the board and a lot of state agencies and a lot of partners in the field. And the CARB at this point calls for similar expansion of quality jobs and access to training.

If we -- I want to just quickly run through this specific recommendations that are in the barrier study. For the CEC, on the energy side, there’s four of them. The first is a workforce fund that will expand jobs and training in disadvantage communities across the state along with clean energy investments. This is, I think, critical because the barriers studies, both part A and B, call for expanded access to jobs and training, that it’s necessary and it’s also very expensive. So, having some financing mechanism, I think, is incredibly important.

The second is about attaching labor standards to incentive programs and the procurement process. The third is community workforce agreements, and we will talk about these again during our discussion. And the fourth is to integrate IOU programming with the main workforce development system to kind of standardize our training systems in the state.

On the transportation side, these recommendations are echoed, not quite so specific, but calling for, again, first of all elevating projects that deliver jobs to disadvantage communities, and second expanding access to training pipelines, career pathways. So, I think we're looking at the same set of goals with slightly different implementation efforts.

This is the technical part. This is my little green job slide. And I brought this in here because I think it's worth reminding folks about this vocabulary. I've heard the term green jobs creeping its way back into the collective vocabulary in California and, in fact, across the country. And I just wanted a quick reminder of the things we've learned over the last decade about green jobs. And this slide is because I think, you know, back in 2008, 2009 people were talking about green jobs like it was little green men from mars that were going to deliver this exotic new species of wonder to the planet from somewhere else. But as we know, this is not those jobs, the jobs that we're talking about are for the most part traditional industries and traditional occupations. Some of them new for sure but mostly traditional and with new and evolving skill sets but within industries that we know and talk about. So, I -- it's important to restate that even though it's obvious because I think thinking otherwise skews our implementation. It changes what we invest in and it changes what we promise to people. And I think we need to be really clear about what jobs we're talking about.

So, these green jobs are great jobs, they're not some futuristic wild kind of job. They're highly technical. My example on this is that, you know, everyone that I know is all excited about self-driving cars; right? But the job that delivers and embodies the equity promise of the clean energy economy more than any other is probably bus drivers; right? We call them coach operators, coach mechanics, also light rail mechanics and operators. These are the jobs of the future. These are the clean energy jobs and these are jobs that deliver equity to disadvantage communities in all kinds of ways through mass transit. So just think about that for a second. And we will talk about that when we are in discussion.

I also want to think at this point just to hang a lantern on the series of related initiatives that are going on right now dealing with the same jobs and the same economic framework. So not just 350 but AB 118 Investments, Prop 39 Investments, SB1 Investments that are going to start putting 5 million a year, every year into transportation upgrades, so. And there's many, many others of these. But each of these to some extent is premised on the idea that they'll be new demand for workers and we need to create a skilled workforce to meet it. And in many of these cases the emphasis is rightly on connecting disadvantage communities to economic opportunity in the form of these jobs and training.

That is great news. I am pleased to see that but I want to emphasize that this does not require a whole series of separate training programs and training investments; right? Training investment, yes, but we need to build on what works. Construction and manufacturing pipelines, for example, look the same; right? At least at the entry level. So, just keep in mind with that.

So that brings me to my next sort of background point is just to remind people that we really need to start with the jobs. There are -- there's a vast array of clean energy jobs, of course, across all sectors certainly the renewables and energy efficiency sectors that we're talking about and in transportation.

But the point is to start with what the jobs are then you figure out what the skills you need to do those jobs and the credentials and then you build pathways for low-income Californians, other folks in disadvantage communities with lower skill sets. How do you get them prepared for those jobs and skills? And this is what, you know, sort of pre-apprenticeship and [indiscernible] basic education do.

But I think the instinct for everyone, and certainly for people who don't live and breathe workforce, is to start with the training; right? You want to start in the community. You want to start with the communities we're targeting and say, like, let's train a lot of people. But training does not create jobs, it does not guarantee employment, and it is agnostic to job quality. So, I just want to hang that out there. Of course, we need it and we need access to it and we need investment in it but just remember what it can and cannot do. And I think the first commandment of workforce development is really know thy labor market; right? So, this is one reason that we'll see a lot of emphasis in this work on apprenticeship and pre-apprenticeship because this -- that is a system that navigates that intersection between supply and demand in the labor market that almost nothing else does.

So, the big thing here is that you need to connect, again, supply and demand in the labor market, which, I remind folks is very different from supply and demand in the energy market, and we can talk a little bit later about what that means. But just as hope -- just as hope to create quality jobs won't create quality jobs but you have to put standards on employers. So, you can't create a bunch of training programs and hope that it transforms a community; right? We need to do this intentionally and simultaneously.

So, I will also say, I was going to talk a little bit about matrix now, but since we just had a presentation on that and there is an entire paper now written on that I have a slide at the end that is sort of our thoughts on how to update the workforce matrix, but I think we'll leave that aside for now.

I want to move quickly to the one other slide that is the slide that explains all of the things and this -- oh, I forgot to do this. I'm getting ahead of myself because I only have 10 minutes. So, let me just back up to say the piece about the jobs. What the jobs look like. About four years ago I worked with the US Department of Energy to identify the top 40 emission critical jobs in the American solar energy market; right? And a lot of them -- my slides aren't working now. There we go. A lot of them look like that; right. A lot of them look like that; right.

So, we're talking about everything from construction and maintenance in the field to software engineering; right? So just remember we're talking about a whole lot of different kinds of jobs and we have to say what that means, you know, construction, we divide that into installation, maintenance, operations, project management, there's also sales and marketing and system design and engineering and manufacturing, R and D. I don't want to go in the weeds. I just want to remind you that the important thing is that we start with knowing what the jobs are and then we move to the training.

So, now, again, I will return to the one slide that I have that explains everything that is a diagram that, I think, is near and dear to labor economists everywhere. And that is describing essential elements of workforce development. And it looks like that.

So, this is the technical part as I said. I think, I just want folks to think about these things together. So, to deliver equity you have to understand all of the stakeholders in this. So, you have businesses, which are the firms who employee people, you have workers who do the work and where possible are represented by labor unions or other organizations that are paying attention to worker interests, and you have education, these training systems which could be SBO's; right? They could be community based organizations, they could be community colleges, they could be labor unions, they could be any number of training programs. But you need all three. And if you think for a minute what would happen if we left one of these out. If you leave the firms out and you just have workers and training systems, that's okay. We know what that looks like. But you're in danger then of training folks for skills that they don't need for jobs that don't exist. You have to know what's happening in the labor market. If you leave out the training piece, then we're just old school. Then it looks like 20th century workforce development; right? Firms and workers are on their own. You get trained once, you go in the job market and you end up with a lot of skilled mismatches and no upward mobility.

And the last one. We also see this quite often. And you're thinking about designing and training a jobs program. Is you do firms and training systems but you forget the worker interests; right? So, if you do that, you end up with training and hiring and training without concern for job quality. And without concern for the interests and the capacity and the needs of the kind of workers that we are trying to move up in the labor market.

So, I encourage us to think about all of these things and to know that I can't emphasize enough that if you want to provide opportunity for those who have been excluded from opportunity, and if you want to share both the health and economic benefits of the clean economy with communities who have suffered the worst impacts of the old energy economy, you need to offer something more substantial than a simple training program. You need to engage the entire system.

Having said that, I think we're going to move into the discussion. Let me say that both sets of the recommendations, as we've seen, call for more training, more jobs, and attention to quality in both. I think that is great and that is essential. The question for the group is going to be how do we ensure that these labor market strategies actually deliver the economic promise of clean energy for disadvantage communities.

And I'll run through the questions. I think we're going to do this by looking a little bit of what that looks like on the ground. A little bit about considering the specific recommendations in the Barriers Report and how this interacts with supply and demand in the labor market. And I think throughout, again, I want to hang a lantern on thinking about an integrated approach. Not just to energy and transportation, but to how do we align the workforce imperatives of SP350 with those outlined in 118, Prop 39, the many CPUC processes that are happening now, SB1; etc., that we want to think about this in an integrated manner.

So, what I think I'd like to do is go around and have each of the panelists introduce themselves, give you some of their remarks, and then we'll move into -- I have two pages of questions. We won't get to all of them today but let's start by going around.

So, Carol do you want to start?

MS. ZABIN: Sure.

Hi, guys. My name is Carol Zabin. I’m director of Green Economy Program at the UC Berkley Labor Center. And I’m so pleased to be on this panel with Sara White. It’s great to see her and the labor agency involved in these workforce discussions with the ARB and the CEC and other energy agencies because I think she offers a real depth of expertise on what works.

Our organization is a research and education organization. We’ve done a lot of commissioned work on workforce recommendations having to do with climate policy, including several studies for the IOUs at the behest of the public utilities commission on their energy efficiency programs and also a lot of studies on job impacts and various climate policies.

Is that all you want right now? Or do you want me to say --

MS. WHITE: Okay, let’s go around and just do introductions. That’s make sense.

MS. ZABIN: Okay.

MS. WHITE: And then we’ll come back.

MR. BRAUER: I’m John Brauer. I’m the workforce and development director at the California Labor Federation and the workforce and economic development program at the Fed. We resource our affiliate on apprentice and preapprentice programs around the state. We’re involved in the Prop 39 initiatives that the state workforce board has been building in nine different regions. As well as working with the California Department of Ed and putting those same apprenticeship readiness programs in about eight different high schools as a start of the California partnership academy process. We work quite a bit also on to get them additional resources. Some of which come from you all and ETP and others to get journeyman and apprentice skill upgrades. We're, for instance, involved in the automated demand response initiatives that you all are doing in conjunction with IBW and NECA as part of the apprenticeship system building off of that.

We also have been doing quite a bit around AB118 through ETP working with the transit agencies and we helped Santa Clara Valley and Commissioner Scott has been out to help create four different apprenticeship programs out there. But also, as they're converting their fleet over to have the workers there. And so, we're kind of involved in both the construction energy efficiency, renewable side of things, as well as the transportation piece.

MR. NAKASONE: Ross Nakasone, BlueGreen Alliance. The BlueGreen Alliance is a coalition of labor and environmental groups. We're national, nonprofit. And I'm here in California.

Our mission is really to try and address environmental challenges in ways that actually create and maintain good union jobs. So here in this arena our focus has really been on increasing access for those in disadvantage communities and low-income communities to good career track, clean energy jobs.

Let me just say we were really heartened to see the job quality and job access components that are now principal recommendations. We're excited about that. You know, we really do see the report as sort of a first step in addressing a lack of access for those in disadvantage communities and communities of color so. Looking forward to more.

MR. PARHAM: My name is Melvin Parham with Rising Sun Energy Center. I am the director of the GETS program, Green Energy Training Services. I oversee the workforce development pieces as far as, like, the construction, pre-apprenticeship training that we have. I also oversee our solar program as well. We also have a youth program to where they do energy efficiency and they go into low-income community homes and they install measures into their homes to make their home more energy efficient. I also do a lot of job placement. So, I will train somebody for up to 12 weeks of training, recruit them from low-income communities, give them the necessary skills in our pre-apprenticeship training, and then place them into careers. So, I move the low-income community from being low-income and to going into livable wage jobs.

MS. WHITE: Great. Thanks, everyone. I think we could spend an entire day with these four folks. Actually, a week but we don’t have that so.

I’m wondering if we could -- Carol, if you want to set this up for us. How are we supposed to think about this before we talk about some actual concrete programs on the ground. But how do we think about this mix of job quality and training and different policy levers and how state programs can align on this. I mean, how should we think about this supply and demand question?

MS. ZABIN: Well, I think as we --

UNIDENTIFED SPEAKER: Microphone.

MS. ZABIN: Sorry.

MS. WHITE: Thank you.

MS. ZABIN: I think it is really important to discuss the role of energy agencies and what they can do and what they cannot do. And I think their most powerful role in setting up the outcomes that we want, which are getting folks into good careers, is your role in shaping the jobs that are created by either the public investments that you directly oversee or the mandates that end up generating private investment.

And what we’ve seen, you know, it just to break it down on the energy side, most of the jobs that are accessible to folks without access to a college education are blue collar construction trades jobs in energy efficiency and renewable. It's not all the jobs, but that's the bulk of them.

And there we have in place in the state mechanisms and institutions that make those jobs good jobs and that create pipelines into them for folks with less skills and opportunities and that is through our apprenticeship system and through mechanisms, such as, community workforce agreements that set a standard on the job quality and then have -- has language that actually sets goals for hiring of targeted groups or groups -- workers from local areas. And those have a track record of working in all kinds of public works projects but they also have been used in building utility scale. Renewables, etc.

And I was very pleased just to see a new community workforce agreements signed in Fresno as part of the -- transformative climate communities program where all of that GGRF funding will be allocated in a way where there's a framework for insuring that local folks are -- have access to these career paths in construction through apprenticeship.

On the supplier, the preparation of workers, that's really not your area of expertise in the energy world. But I think what we're seeing is some efforts to align the funding that you can designate or have designated for training. And I would include, for example, here the $30 million that the IOUs have for training. To align that, again, with the systems that already exist and are the main training. So, I was pleased to see that recommendation.

And with Prop 39, and now SB1, there is a real opportunity with the CEC and the ARB to sort of funnel all that money into the same place where it can then be deployed to -- in an coordinated aligned way to help folks get into these pipelines through -- in construction.

Now, I'm not supposed to call it pre-apprenticeship anymore. I'm supposed to call it apprenticeship ready programs but what we mean by that are the ones that are actually linked and have a track record of getting folks into apprenticeship, like Rising Sun has worked really, really hard to do.

And for other sectors who don't have such established apprenticeship there's opportunity to create apprenticeship which we're doing in transit or use the same elements of one ensuring a livable wage for the public investments that we're making. And two, you know, creating a pipeline through preparing workers.

So, I think I should stop there.

MS. WHITE: Yeah, that’s great. I think -- can we advance the slide one for me? We sort of broken down the -- the CEC recommendations into sort of two parts of what you’re talking about. One, is the supply side, you know, by which we mean it’s the supply of workers; right? It’s human capital, it’s skills, and the training systems that deliver them, and the demand side, of course, is the jobs.

So, I think we should tackle them separately and want to talk about community workforce agreements. I think that’s pretty essential, that’s on the demand side. On the supply side, we were sort of headed with this apprenticeship conversation. I want to touch on that a little bit more and maybe talk about some examples.

I mean, I was wondering if perhaps to drop from our, you know, 500,000-foot conversation about job quality that we could move into really explaining to folks what this looks like and why you want the experts to do this work.

And so, I was going to ask Melvin, actually, if you would talk a little bit about -- well, almost any of your programs. But the one I’m most familiar with, which is your Prop 39 pre-apprenticeship program, and the ways -- why that is so important and why this works in disadvantage communities.

And I was thinking specifically also about, you know, the real ground breaking work you're doing with like [indiscernible] informed training and these kinds of things which are important. So, let's hear from you on that and then I'll move to John to talk a little bit more about how apprenticeship systems work in general and the MC3 programs.

So, Melvin, do you want to weigh in?

MR. PARHAM: Absolutely.

Yeah, so our program -- first of all, let's talk about our demographics. We serve low-income men and woman with barriers to employment. We actually go into the communities. We network with the local [indiscernible], the one stop career centers. We network with the adult schools. We also go to a lot of high schools and we bring in disadvantage workers into our training facility. We give them over 280 hours of hands-on training, down the line of MC3, which is multicraft core curriculum. That curriculum is recognized by the building trades. And what it does is that gives them the tool belt under them, under their cape. So, basically, they get the tools and the necessary equipment that align the professional skills development, that align of construction. We also run an all women construction training program as well. And it gears them up for workforce, you know, being ready for the workforce. We network with unions, a lot of union involvement. So that's taking them out the field trips to the union, that's bringing unions into our facility to speak with them and do some type of hands-on training with them. That also give them a case manager and a job placement coordinator to work with. So, they have all this training that they -- and all the support system. We network with other organizations like West Oakland Job Resource Center. We network with Trace Woman, Inc. So, we build this huge platform of experts to help the participants to get to where they need to go.

Our training, what we do is we give them completely hands-on in the field real life experiences. We do a lot of research down the line of what's working and what's not working. And we go back to our advisory councils, what we call it. We have a workforce advisory council that we network with them to say what do they need to be learning in the field. We then teach them that, after gathering all the information, we teach them that. And then we re-access where we're at with them.

A lot of things -- one thing that we did change, we started using Roots to Success. Roots to Success is another curriculum to where we actually get them to see a lot of things that where disadvantage communities don't have access to certain things that other communities may have access to. So that was something that we built on a lot.

One of the biggest things with our program is that we placing people into employment, into meaningful jobs, jobs that they didn’t have access to or didn’t have no knowledge to go into until they walk into our doors. Being able to network with other organizations that’s providing the same training for pre-apprenticeship allows us to, you know, work together into bringing people under our umbrella and then sending them out into the workforce.

MS. WHITE: Thank you so much. I’m wondering if -- John, if you could follow up on that. I’m thinking of two things you can take this in that direction. One, is sort of talking about the kinds of curriculum that Melvin was talking about sort of the importance of -- with training. It’s not just classroom training and I don’t mean by that it’s also hands-on training like an apprenticeship, but it also this piece of wrap-around services and the transformative nature of this kind of work. Like what it really means to do training -- and then maybe move from that genre to talking a little bit more about MC3 and apprenticeship and what that looks like. And maybe how that -- maybe that -- maybe this is all much -- also how that solves this problem of, you know, we have all these -- we want to put a lot of investment into training, but how do we train up a workforce and make sure that they are, you know, as Melvin was saying, connected to jobs and not just searching for jobs. And apprenticeship, I think, solves that problem. So maybe you want to take on a couple of those.

MR. BRAUER: Let me just start with I think, you know, this governor set a goal of actually doubling the number of apprenticeships in having a million certificates and credentials be created over the last -- by the end of this -- by 2020. So, I think, there has been both nationally -- because I think even the current White House supports apprenticeship. But -- and in the State of California the real value of it.

The big failure, I think, in American education and workforce is we don't help a lot of younger people but folks in general find a calling. An apprenticeship is probably the best and closest to helping folks do that. The apprenticeship system is also really driven by the actual industry demand that's taking place. So, there's a real opportunity, again, as you heard before, to link the actual jobs to the demand going on. And, frankly, the system that creates a real career path for folks as they enter in it.

In a lifetime, I must say I've been to watch -- we do quite a bit of helping our affiliates apply for ETP funds. And I've seen solar installers companies, one of whom still strikes me to this day, they also make electric cars, but they came for an application and asked for funds to do two weeks of training on the sales side and two days for the solar installers. And I was -- it was pretty amazing to me that -- what that may look like in the long term.

But having said that, I -- a couple of things, one, is the apprenticeship system is a way to have folks gain four or five years and frankly $40 to $50,000 investment by the employers and the union in the training of those folks. That's not public monies that's coming, those are monies that are coming as part of that joint apprenticeship training agreement and a real investment by the industry itself in those workers. And a very clear path to graduation. They also were marked by real job quality. There is real wage progression based on both experience and also skill attainment. And it's absolutely critical in this equation.

And we think that that's also then really a question of equity. Both in terms of folks accessing jobs related to clean energy but also frankly the quality of those jobs I presume is part of the job quality equation for you all in the equity, answering the equity piece of that. You have a state regulated pathway in system there and a federal system in relationship to that.

On the apprenticeship readiness side, the piece that -- and the undertaking that the state workforce board with the Prop 39 dollars and the other initiatives that are being taken regionally, such as Melvin's program, is that they're actually tied to real apprentice programs. One of the requirements for the state workforce board and for local workforce boards, for instance, AB54 basically said if you had what was called a pre-apprentice program, that it actually had to agreement with existing registered apprentice programs. So, there's a real accountability piece.

And that the MC3 curriculum and the multicore career curriculum and the initiative around the Prop 39 stuff, also then gives local communities both a way for those who are not ready for the outreach to get into apprenticeship immediately, to have an additional door for folks to get into to have an ability to start to understand what the possibilities are within the construction trades or the -- or within the energy industry itself. As well as then to address supportive services and other issues, barriers that folks may have in that particular equation.

It's also, frankly, a really good way to start to address some of the failures of the apprenticeship system. Even the Rising Sun is having cohorts of half-women or 100 percent women. In particular, cohorts where an apprenticeship and some of the trades that we've historically had that as a real issue, as well as other communities out there. And I think you're really starting to see a significant change in that.

We, for instance, are working, again, with IBW and NECA on the automated demand response. The goal of that initiative that you all are funding is to use the MC3 as a way to recruit both by the local IBW, but also then the existing MC3 programs to bring folks from those disadvantaged communities in. Both into their apprentice program but also then into the IB -- into the MC3 if they're not ready.

So, I think, just again, I think the fact that it's also demand driven and that's -- the other piece of this that I think is probably the hardest, whether it's a community college, the adult school, a community based organization of the community in general is really understanding that those apprentice programs and the MC3 programs, frankly, are built on the actual demand going forward in that locality in that region. You can't just have, what former secretary of labor Tom Perez called, a system of "trained and pray." And, you know, it's just the best way to meet the expectations of everyone frankly.

MS. WHITE: Thanks John. I think -- I like the way you’re talking about it, which it reminds me that apprenticeship also is a, you know, it’s a process. it’s not a thing. I mean, it’s not just -- to be an apprentice you have a job so you’re doing training and working; right? So, it’s, I think, I hear a lot of people say well let’s do a whole bunch more apprenticeships. But unless you have the jobs you’re not an apprentice. It’s a requirement.

So, thinking about how that unfolds over time and really about -- and the importance of that in the targeted communities. Because you’re connecting people to careers rather than single jobs; right? And I think that’s a huge thing.

I want to -- I want to ask you some more specific questions about apprenticeship but I did want to also quickly raise the issue again of job quality and just do some defining, because I think we throw around these terms but we don’t always know what we mean by that so. The obvious metric for job quality is wages; right? So, we look at wages. But there’s a whole lot of other things that go into job quality; right? So it’s benefits. It’s access to fair scheduling. It’s workers having a voice in the conditions of their own work. It’s having some autonomy. There’s a -- the more intangible pieces of worker voice are also critical here. And, I think, that’s why having union apprenticeships in this case is about also connecting workers to a series of institutions that are representing that voice.

But in and outside of the union question, I was wondering, you know, this key, if we turn to the demand side for a second, this key to getting job quality can be through the community workforce agreements; right? It's one of the ways that we know that we can have quality jobs.

And Ross, I was wondering if you wanted to say a little bit about how community workforce agreements work and what their advantages in this context.

MR. NAKASONE: Sure. So, you know, community workforce agreements really are a, you know, an arrangement between the -- I'm sorry. What is the triangle, between workers and firms, between labor and management? We intend to negotiate kind of some of the terms and conditions of the work going forward. But the advantage -- so that's sort of the -- but the power of the community workforce agreement really, I think is found in where the community organizations actually intersect with that effort. They are involved in the development of the community workforce agreement and experience really has focused in on ensuring that the workers who are actually engaged in the work associated with that agreement are locally hired, are from disadvantage communities are -- that there's some sort of consideration for workers' who have employment challenges.

As well as ensuring training to the extent that, you know, there's some sort of specific components as it relates to the agreement.

But, I think, one of the, sort of, most powerful components of that really is about that it's bringing kind of a broader section of parties together, communities, workers, as well as management. And they're really setting concrete standards and goals around the agreement that everyone can sort of agree to. And then ultimately, you know, it promotes accountability and transparency with the goals and with everyone engaged and their folks sort of monitoring how these agreements move forward to, frankly, make sure that all -- all parties interests are actually recognized.

MS. WHITE: Thanks so much. I just wanted to let folks know too that the state board is actually working on a series of tools and convening to help other state agencies who are interested in tying community workforce agreements to the kinds of investments they're making in -- for example, with the Transformative Climate Communities but also with Clean Energy and Transportation to give some people guidance on how that actually works and how you build those.

So, we will be -- you can come to us for information on that and we will be helping hopefully move that, with this part of the recommendation, into the mainstream of the way the state does business.

I'm wondering, there's so many, many things to talk about. I wanted to go back for a minute to the -- the pre-apprenticeship and the opportunities of apprenticeship.

And John, I'm going to return to you quickly for a second. I'm wondering if you want to talk a little bit about what this looks like on the transportation side. And I'm thinking about this in the case of, you know, again, connecting workers to career pathways that they might not have had before in the context of apprenticeship and what that looks like.

MR. BRAUER: I can just give you the example of what Santa Clara Valley Transit and our local ATU 265 and folks have been working one which is we -- they have created within the transportation agency four different apprentice programs that are DOL and DAS certified. The initial one is a bus coach operator that's been certified as the first of its kind in the country, believe it or not, that got certified by DOL and DOS -- DAS. As well as an existing bus mechanic program -- apprentice program that they created and then rail worker and overhead line worker.

What they did also as part of that was realign their job functions and positions with the transportation authority. So, they lined up other occupations that are not apprentice occupations right now but took them from being dead-end jobs and put them into creating career pathway pieces. They also have, frankly, taken the bus coach operator as sort of the entry point within the transportation system as a whole. So those folks were either on the operator side or the mechanical side or even the light rail are coming through that initial apprenticeship for a period of time. It’s a way to sort of, like on the equivalent of the MC3, to introduce folks to the agency itself to the range of occupations to the culture of it. And as well as the basic work processes of being a bus coach operator but also from that end.

We are now talking with other ATU locals and other transit agencies about replicating some of that -- those exact kind of career pathways and apprenticeship programs as a start. We’re also sitting down with the local workforce boards and the transit agencies to try and see if we can’t create either an apprenticeship readiness program or a transit boot camp, frankly, you know. We have had Santa Clara Valley that the turnover over the next five years, you know, is several hundred bus coach operators. I mean, the demand is going to be there from the replacement side of job growth. And they’re not alone in -- as a transit agency in that piece. As well as really needing to deal with the mechanical side.

So, there are lessons that can be learned and have been learned from the building trades being very robust apprenticeship system in the State of California to looking at creating that in -- on the transportation side. Again, the number of apprentices and those openings are tied to what the transit agencies are looking at as their demand going forward. They know how many are eligible to retire right now as well as go forward. And it’s also the other big plus for Santa Clara, I think, and again, you all have been a major funder, is they’re trying to turn their fleets over in terms of different energy uses and they’re no different than any other transportation agency.

So, it’s a way to upscale their existing workforce and also bring new folks into meet as they’re changing over to electric or hybrid or CNG or whatever they’ve been – whatever they’re going in.

MS. WHITE: Right. Because the alternative fuels have changed the technical nature of the job; right? There’s an incredible amount to learn if you visited one of these sites I encourage you to; right. Of the, you know, moving towards electric or one of the hybrids that you’re suggesting.

MR. BRAUER: Right.

MS. WHITE: The things that folks have to know in order to do these jobs. I mean, it’s a classic example of traditional job with an entirely new set of skill set because of the highly technical nature of the evolving fuel structure.

MR. BRAUER: And I would say that the transportation agencies themselves, authorities themselves, are very interested in that local hirer disadvantage pipeline as well. I mean, we're kind of hearing that and so are the unions. I mean, I think, it's the same wants.

MS. WHITE: Right. Thanks John.

Carol, what are we missing?

MS. ZABIN: Well, I guess, I'd like to hear questions from the commissioners. Maybe we're there. I think we're there.

MS. WHITE: If there aren't any, we can continue this discussion, that's okay.

MS. SCOTT: I don't have any specific questions right now.

MS. WHITE: Okay.

MS. SCOTT: I really was kind of looking for -- you've got a very nice list here --

MS. WHITE: Right, yes. No, we weren't trying to put you on the spot. I just didn't want to hog the light because I could talk about this all day so.

MS. SCOTT: Well, no, no. I do think we want to have a little bit of time for questions. I was wanting to hear a little bit more about some of the thoughts on your questions before I weighed in but.

MR. WEISENMILLER: Yeah. I guess the one question I had was Carol has talked a lot about working with the IOUs on some of the workforce questions. How about the POUs? Have they been involved with the -- anyone on the panel?

MS. ZABIN: Well, you know I do -- we always highlight one of the best training programs in the state, which is LADWP's model of the precraft training program which differs a lot from the IOU programs in the same sector which is weatherization for low income communities and now it's moving into their community solar program. But we highlight that because it has the -- even though it's not under a community workforce agreement structure or project agreement structure, the elements are the same. In that, you know, it comes from the -- it's completely tied to the number of jobs so you're not training folks for no job. It's a learn while you earn model. It's a pre-apprenticeship model in the sense that instead of going into the construction trades, in this case, you're going into utility work and helping with the aging workforce issue and turnover that the utilities dealing with.

But again, it's a structure where it comes from the investment side of the labor market, it comes from the jobs. And all the training is calibrated to that and it's calibrated in a way where people come in with low skills and as they move up in skills they move up in wages. So, there is a real structured career ladder.

In the IOUs programs and contrasts, weatherization is outsourced to a variety of different organizations who may be, you know, very community focused and well-intentioned but they don't have anywhere to place people. So, same with CSD and we've been working with the Community Services Department on their weatherization and solar programs. And the problem is they're dead-end jobs. And how can you link them? LADWP can link them because it's part of their, you know, it's part of their institution as an employer. There are ways to link CSD programs or the IOU, low-income weatherization programs. But it has to be intentional, otherwise it won't happen.

So, we've suggested, for examples, for CSD that in their call for proposals to carry out and administrate the work as they add workforce development they look for best in class training programs that already are linked to apprenticeship, like Rising Sun, which don't exist all over the state but they exist in a lot of areas where those training programs already have links to a career and at -- through their -- with certified -- state certified apprenticeship programs.

So, there are ways to do it, LADWP is -- it's easier for them because they have the whole utility and they're not contracting out that work.

So there, yeah, so -- does that answer your question?

MR. WEISENMILLER: Yeah, a couple of others. I mean, I know one of the things -- being in like Curran county, one of the things the education folks say there is that the fossil fuel industry, which is not what we're talking about today, but they basically have a connection to the, you know, community colleges there to say, okay, this is how many people we're going to be hiring in the next X years.

MS. ZABIN: Right.

MR. WEISNEMILLER: And so then has community college focusing its training programs.

MS. ZABIN: Right, right.

MR. WEISENMILLER: And, again, that sort of connection between, okay, we're training people but we have jobs lined up as opposed to just a hope and a prayer.

MS. ZABIN: Yeah, exactly.

MR. WEISNEMILLER: So how do we get that more generally to the challenge?

MS. ZABIN: Well, I think through these initiatives around apprenticeship. I mean, every apprenticeship program has a local educational partner which is a community college.

MR. WEISENMILLER: Right.

MS. ZABIN: And there is new funding for apprenticeship at the state, you know, frankly, apprenticeship works better when there's some -- somebody able to negotiate wage increases as skills are acquired. Without that employers want to use a system and keep the wages low even though they're using the public system to train workers and it doesn't work in the long run because there's higher turnover when the jobs aren't good and the investment and training is then just lost. It's very hard to train for bad jobs.

So, I do think this expansion of apprenticeship and using the elements of apprenticeship where you start with the jobs, you get commitments from employers to have a career path, that's kind of the only way it works. We haven't seen, you know, we face the labor market with a lot of low wage jobs that don't go anywhere and the question is: do we want to build our clean energy economy that way or do we have an opportunity to use the assets and infrastructure that the state already has where it works?

It's actually moving people up and make that choice. And you guys have a role in making that choice by structuring your investments so that there are standards on the -- on the contractors who participate in the building the clean energy economy.

And that’s your most, again, I’d say that’s your most powerful role. And if you can donate some of -- little bits of money here and there for a pre-apprenticeship programs that are also getting funded from the educational system and other sources, that’s wonderful. But your power is in shaping the jobs.

MR. WEISENMILLER: Historically the utility meter readers was sort of the classic entry path if you looked, I think it’s like a three year, ten year and they moved, somewhere in the utilities but. What’s the current gateway into the utilities? As you pointed out, they all face these aging workforce issues, there’s huge opportunities there for really good jobs.

MS. ZABIN: Right. Yeah. And the gateway can be lineman, men and women, tree trimmers now have become some of a gateway with the case of LADWP, it’s the weatherization workers, and it could be community solar workers, you know, utility own community solar, where they have some leverage over the contractors who are installing or they do it as, you know, as part of the utility employee role and tasks.

So, there are -- there are -- there really are plenty of entry level positions that could serve that pre-apprenticeship role to help people then find their calling in one of the skilled trades or in, you know, pipeline repair or many, many things that utility still -- the grid utilities are still responsible for.

MS. SCOTT: So then, I had a question about the -the demands for these programs. John, you mentioned that you have lots and lots and lots of transit workers who are ready to retire. Do you have a whole bunch of folks in the trades that are looking to come into those positions? I mean, I think the additional layer on that question would be what Carol is raising, which is and then does that lead to a way up your way up the chain and get on a career path?

And, then, I might ask the same question to Melvin about your program where you can start as early as high school, it sounded like you were saying, and make your way right onto a living wage pathway and are you finding that you have to turn people away at the door because there's so much demand that you just can't keep up or what's the sense of how much demand is out there for these programs so that we can kind of think about the scale of the needs to be.

MR. PARHAM: I can take the first. I can take the question. So for me, on my side, and I do network with a lot of other organizations that run pre-apprenticeship programs. All of our apprenticeship programs are always maxed out between 25 and 30 people. We run them at least three times a year. And we, ourself, we have a graduation rate of 85 percent. So they continue throughout the program. Our graduation rate itself -- I mean our placement rate itself is at 86 percent. So everybody that's coming into our program is getting something out of it using the MC3 curriculum. They really do appreciate the structure of the pre-apprenticeship program and then going into the jobs that they have been trained to go into.

Now I would say, just to back up a little bit, about the energy efficiency questions that Carol was tackling. We switched our program around a lot. We was all energy efficiency based program to where we was doing installation into the wall, floor, attic, and crawl spaces and the things of that nature. We found out that the jobs was all low wage paying jobs. So wasn't taking the community out of the poverty levels that they're coming in at, you know, the highest paying job was between $13 and $16 an hour. Now somebody can come into our program from being on Cal Works getting a check for fife eighty-three a month to now getting twenty-six fifty an hour by going through the trades. So we did restructure our program for that.

We do hold classes three times a year, which accommodate 20 to 25 people and the graduation rate is about 86 percent. So we have an [indiscernible] amount of people ready to come in. Especially woman. We've increased our woman population by 70 percent.

MS. SCOTT: And I don't know, John, if you had any thoughts on that as well.

MR. BRAUER: Well, I was trying to understand your first question. Because I consider sort of the transportation and that piece different than the building trades piece.

MS. SCOTT: Fair enough. So, you think that it does have the career path that Carol was talking about that was missing from the energy efficiency side?

MR. BRAUER: I would just reiterate sort of what Melvin said. I think the experience of a bunch of our pre-apprentice programs frankly have -- and we had a discussion about this at our quarterly meeting. A lot of them are looking at both from a social enterprise aspect but also they've actually gotten local publications pieces of doing some energy efficiency but other various kinds of activities.

And, frankly again, if anything, building on the existing system for supporting those kinds of things where that's the best example of how that should work frankly in that kind of equation.

I can't give you the specific demand on the transportation piece. I do know, again, the applicability of building trade stuff to the transportation side isn't a clean fit. We even have trouble I know from some of my transportation -- working with some of the ETU locals and the transportation agencies.

The bus mechanics, you can't get those folks from the car dealership apprenticeship program and expect them to work. I mean, it really is specific to the industry and the demand that they've got. They've tried to do that to be an answer and it's part of why places like Santa Clara are set up are putting in place the apprenticeship programs that they've got. Or other agencies are trying to fix the existing bus mechanic programs that they've got in that particular equation.

I do know that from an aging prospective they are all saying, whether it's bus coach operators or mechanics, that that demand is there for the next long while.

MS. SCOTT: Yeah, that is what I was wondering. You know, if you have 50 people who are leaving in the next month, do you have 50 people knocking down your door saying, help me figure out how to get on this pathway.

MR. BRAUER: Well, part of it is folks on the transportation side don't know that those opportunities are there.

MS. SCOTT: So there is more outreach that needs to be done so that people know these opportunities are here.

MR. BRAUER: And training.

MS. SCOTT: Okay.

MR. BRAUER: I would tell you that to be a bus coach operator in a bus in a major metropolitan area is an extremely difficult job. Not from the -- aside from the fact that you've got 15 to 50 computers on board and you're driving a very large vehicle, but the level of customer service training, conflict resolution, problem solving, frankly real health and wealth necessary issues. And, again, it’s why places like Santa Clara are setting up those apprenticeship programs and building on their joint worker centers because they’re trying to get themselves to being in a place that's, frankly, industry driven and worker centered and now they’re trying to move also on -- if we can do like the boot camp and other things to be community focused on that.

MS. WHITE: I think there's another piece of this, returning to the -- oh, Carol, you go ahead.

MS. ZABIN: Okay. I was just going to say though there's always greater demand on the part of low wage or unemployed workers for these good jobs and good pipelines than there are pipelines, and that's why it's so important for those who influence the investment side when they have a choice and there are way, way more opportunities to make that choice to go with, you know, contractor -- responsible contract language. I know there's a proceeding in the CEC on -- what does responsible contractor look like, choices to go with contractors who are willing to participate in community workforce agreements, go with LADWP’s model of insourcing weatherization. I know we can’t probably change the IOU structure, but when we have new things we should look for the better structures that put people on a path and hold up our public investments to a standard on the workforce side.

It gets you way, way better work, too. I mean, I've had a lot of discussions with Andrew about the quality of work on energy efficiency, which is, you know, the HVAC classic example of so much energy savings left on the table because we don't have a skilled workforce. Not that there isn't a skilled workforce, but they’re not -- their contractors aren't the ones who are getting the gigs because there are no standards and so the competitiveness in the construction market is such that we're doing a race to the bottom instead of a race to the top so.

MR. WEISENMLLER: Carol, just to be on the record. We've lost three PC commissioners, all of whom are very interested, some of them are listening as they're driving elsewhere, all of whom have their staff here in the audience. So it's not that they're not interested in these issues, but just [indiscernible] demands. They certainly asked both of us to make it clear they are listening and/or have staff listening.

MS. ZABIN: That's nice to hear, great.

MS. WHITE: I wanted to return just for a quick second back over to the supply side where we were in the discussion. And also, Commissioner Scott, the question that you asked about, you know, lining up supply and demand. That's a huge question and somebody if we could do that a workforce development system because we wouldn't need to know that answer it would just work; right? So sort of figuring out this calibration of supply and demand and local labor markets is the grail. We're all trying to do that. And what we're saying is, we have to help the experts who are trying to do that, think about that before just doing investments and training; right? There isn't an easy answer to that and we're trying to get at some of the ways we can do that.

I think that's one reason, and again, to come back to the building trades, which is a really unique beast but at the same time is where the majority of access to these sorts of jobs will be for folks at the lower end of the skill spectrum at least at the beginning. And, I think, it's important to remember that -- and this also relates to jobs that the IOUs insofar as they are jobs in the trades, right, and some of them are. Is that you've trained to be an electrician, right, you don't decide when you decide to be an electrician that I want to be an electrician because I’m going to work on this utilities scale generation project, right, you train to be an electrician.

So in the same thing, I think, we see this and we've seen in this in Prop 39 and other cases that your connection [indiscernible] construction careers, which is a lifetime prospect of lifting people into the middle class and it isn’t always calibrated directly to the particular project at hand.

So for example, in Prop 39 when we set up the pre-apprenticeship training for that, the point was to get into construction careers that eventually you will have the skills in order to work on energy efficiency projects, but nobody said that you're going to go through Prop 39 pre-apprenticeship training program and you're going to work [indiscernible] that school down the block; right? So, it's a much larger play. It’s a much larger gain. the idea is to get people into the construction industry which we need to do to implement a lot of the clean energy work and transportation work that we want to see.

So you have to think about the supply and demand in a really global way and not just for, you know, how much demand is this particular project going to generate.

MR. NAKASONE: If I can, kind of returning to the transportation, you know, the jobs question relating to transportation. You know, as the energy commission, I guess it was CARB really, right, as the clean transportation side, as you all start thinking about kind of where these jobs are we're talking about obviously operator and operations and maintenance jobs there's going to be, I think, I hope there's going to be a larger demand for -- for example, EB buses as we try to clean our transit systems. There is power in that procurement and there are opportunities to really look closely at the type of jobs that are going to be created from the procurement of electric vehicles, specifically electric buses here in California. And that can include both obviously ensuring that they’re good quality jobs and, of course, ultimately creating good work but also creating, you know, demand, you know, again, going back to sort of this workforce inclusion component. It can actually require and create demand for folks from communities of color; etc. In order to kind of beat the sort of the out flow of -- not specifically Rising Sun but these sort of CBO and apprenticeship ready programs.

And we've seen examples of that, right, the RPS, the Utilities Scale Solar. We've got -- and this is sort of a plug actually. We've got Johnny Simpson here from IBW. He really worked very hard in Southern California, San Diego, Imperial County to really create some really pathways for folks, you know, through local hire where in Imperial County unemployment rate is somewhere in the high 20's where it is an incredibly diverse community. And, of course, obviously needed jobs. And they've actually done a really great job about 75 percent on average for their contracts for local hire. When these things work; they can work.

MS. SCOTT: I think in addition to the vehicles themselves the infrastructure that supports them, that lends itself to that as well.

MR. NAKASONE: Infrastructure, yes.

MS. WHITE: Absolutely. I think that this brings up back to a question that we started with in the beginning, which is sort of everyone wants a workforce development program. How do we do that without fragmentation and atomization and lots of parallel investment; right?

Sort of, I think, this is kind of like the discussion of aligning supply and demand. It is also that we know what programs work. We know to some extent what the demand is what we need to do is figure out ways to enhance, advance, and expand those programs rather than, you know, I feel like the State is very excited about developing shiny new things. But the fact is we have a lot of things on the ground that we know work very well, but they’re just expensive and hard to do. So, it’s really trying to figure out to get in the same place to say, these are our goals together which I'm, you know, excited to see in the barrier study but also we know how to execute and implement these goals in some ways. We know what that looks like and on the workforce side that looks like some of these training programs that we're talking about and how do we put money into building those pathways rather than setting up separate pathways, you know, so that every -- every agency has their own idea of workforce programs; right?

That there's a way that we see this as an integrated system of workforce rather than a set of discrete investments. I think that's what I would like to see and, I think, that's back to this question you've heard some things and whether it is the kind of pathways that Ross was just mentioning or the kind of work that Melvin's doing or the kind of work in the -- in Santa Clara that John was talking about. That just to remind you that there are fantastic strides being made to address this but it's a matter of bringing it together and bringing it to scale.

MR. MCALLISTER: I want to chime in a little bit. I've been listening. I missed it so I don't know what was said too much in the beginning of the panel. But I'd -- I wanted to just chime in.

I hear Carol and, I think, you know, we all -- we know that quality matters. I mean buildings are -- they are systems, so we have to make sure that they function, right, and there's a lot of knowledge that's required to do that. You've got to know how to work with your hands, you've got to know the theory, you've got to know a lot of stuff to make a building work properly, and that's in new construction and retrofits, really more so in retrofits.

And, so, the trades really they're getting their hands on these buildings, you know, and it's residential and commercial I think a lot of, you know, they're different. But, you know, we tend to sort of automatically think of residential and the low-income setting, right, but really a lot of the savings are in the commercial side. And there's a lot of technology available. We have incredible technology.

And, I think, as building performance moves front and center, which it has to, then that puts -- it makes it even more critical and I think obvious that the quality of the workforce that's working on these buildings is, you know, we just -- we can't do the race at the bottom. We've got to make sure that there's a minimum standard.

So, you know, I think that is becoming clearer and clearer and, you know, you've all been thinking about this is a long time and I really appreciate the panel.

And I guess, I wonder if there's anything more to say about utilizing the low-income weatherization programs or these sort of specific programs that are focused on serving these populations and kind of trying to solve the [indiscernible] problem, you know, how do we use those as launching pads to get over to into main -- into train the people implementing those programs that they get over into the mainstream workforce and sort of that is their entry. You know, we had a little conversation a little bit ago about what's the gateway and, you know, how do we -- I think DWP was a good example that you gave because they have everything under one house, you know, so they can kind of of do that, they can start here and move people around and give them the experience.

In the IOU context, what crosswalks do you see to be able to kind of take the contractor approach, you know, third party implementer approach and create, make that little petri dish for job development and then help those people move into mainstream jobs, energy related jobs.

MR. NAKASONE: Can I jump in first, if that's okay.

MS. WHITE: Sure.

MR. NAKASONE: This actually was sort of a discussion point I know during this [indiscernible] barrier study development -- workshop study development itself. And I would want to encourage you to think about for low-income communities and communities of color receiving energy efficiency services is super important. Where they get jobs and how they can benefit economically from, you know, clean jobs, green jobs, energy efficiency work does not need to be limited to ESAP [indiscernible] that, in fact, the mainstream general energy efficiency programs are in entirely untapped job opportunity for communities of color. And I would encourage the commission to think broadly about that rather than saying, well, we're talking about disadvantage communities so we should only be talking about jobs from ESAP.

MR. MCALLISTER: Well, that’s kind of my point; right? I mean, that’s sort of the definition of [indiscernible], I think, so. So, I guess, you know, how do we do that. What’s the implementation look like for that I guess is part of my question.

MS. ZABIN: Well, I completely, completely agree with Ross that we should not limit to these weatherization jobs because they are -- the way they’re structured now they’re dead-end jobs. So, when we have new money or when we're willing to really restructure those programs, we can. And we can, I mean, the best way I think is through communities benefit agreements where we aggregate a lot of these little jobs and offer them to contractors who meet certain responsible contractor standards, who have wage floors, and health and safety standards, and who -- and who are already participating in apprenticeship who are already investing big bucks for every hour of every employee worked, on both the worker side and the employer side. What is it like a $100 million per year in the state of private money that's going into apprenticeship industry money. There's no reason why that -- any of the energy efficiency work couldn’t be structured that way. And I think what we would see is the development of paths where -- and Johnny could -- Johnny Simpson could talk about this more, but we see this in utilities scale solar where the trades have created essentially a pre-apprentice job classification, often called construction wireman, which is the lowest skill of, you know, putting the panels together, and have provided entry level employment for many, many people. But it has a standard on it. It’s not a $12 an hour job. It’s a twenty-three -- when I talked to the Bakersfield guys it’s a $23 an hour entry level job, and it has the opportunity to then give people the experience to successfully apply to apprenticeship. That same kind of structure could work in energy efficiency. The reason it works in solar is because those project utility scale do have project labor agreements that trades are involved, the apprenticeship system is implicated from day one. And so things happen because there's a structure and an architecture in place. And I don't think we can’t really twist those weatherization programs every easily. I mean Rising Sun has done an amazing job of reformulating and becoming a pre-apprenticeship because they saw, and I just want to reiterate what Melvin said, is those weatherization jobs were dead-end and so they didn’t want to devote their mission driven training organization to dead-end jobs. So they moved and have reoriented their pre-apprenticeship to they can get somebody into the sheet metal apprenticeship program which takes, you know, a level of math and a level of familiarity with the tools, et cetera. So.

MR. MCALLISTER: So, I guess, just to be clear what you're saying is: when the structure of implementation, to the extent that we're talking about weatherization. I know it's a broader conversation than that and the workforce can be -- ought to be fungible across all these fronts; right. But to the extent that there’s a lot of money being dedicated to low-income weatherization, then when those programs get reformulated, refunded, you know, re-examined through some process that those criteria ought to be part of the discussion and applied.

MS. ZABIN: Right. So that you could attract contractors who are already involved in apprenticeship.

MR. MCALLISTER: Yeah.

MS. ZABIN: Bid on those programs and be able to compete with the contractors that currently get them which don't have that structure, not that they're bad intentioned or, you know, not that they're at all, you know --

MR. MCALLISTER: Absolutely.

MS. ZABIN: But they don't -- they're not in that structure that actually has good outcomes.

MR. MCALLISTER: Yeah, I would say -- and I don't know if you want to talk about it. But four years ago --

MR. WEISENMILLER: We're going to move on to the next one.

MR. MCALLISTER: Okay.

MR. WEISENMILLER: Next topic -- sorry, Heather's been trying to, you know.

MR. BRAUER: The only thing I would say really quickly is the State Workforce Board, the Green Colors Job Council, of which Carol chaired and I was on, we passed some basic elements around structuring energy efficiency, renewable other things that I would suggest you look at and rely on the workforce board and ETP and the industry to help meet the standards, both on the contractor’s side and frankly on the job quality side.

MR. WEISENMILLER: As we're moving, I would remind everyone that President Picker and I are having an event on Friday looking at some of the changes in the industry which could be pretty sweeping in some of these areas and terms of impacts on utilities relative to the clean tech industry.

MS. ZABIN: Right.

MR. WEISNEMILLER: Which have much different labor ethics, shall we say. Right, anyway.

MS. ZABIN: Right, yeah. And how do we retain the innovation but not deregulate so completely that we lose our social contract?

MS. RAITT: Well, thank you. It’s been a really good conversation. But we do need to move on to our last panel of the day.

The next panel is on innovative clean energy financing pilots for low-income customers. And if the panelists could go ahead and come to the table, we'll have places for you. Thank you, again, to our previous panel.

Our moderator is Deana Carrillo.

MS. CARRILLO: Good afternoon, everybody. We are lucky to be your last panel today at 4 o’clock. So, I have about thirty minutes of open remarks and then -- no, I’m kidding. We will try to keep this short and brief but very content driven, and we have a lot of interesting contributors here today. So, I’m very excited to hear what they have to say.

My name is Deana Carrillo. Good Afternoon. Welcome to the finance panel of today’s workshop. I'm the executive director of the California Alternative Energy and Advanced Transportation Financing Authority, and we’re housed in the treasurer’s office, and our niche is working with private capital providers to help meet public goals. And we have had history of working with both the energy commission and the PUC and a few different programs.

We have a very interesting panel -- group of panelists with us today. So, I am going to keep my introductory remarks short. I was asked to talk about financing program that we are running today. And just for the sake -- we’re going to provide a quick overview of the recommendation in the Barriers Report and then really launch into what programs exist today, what challenges folks are facing, and what different solutions they've identified. I think there's a few different financing structures that will be highlighted in today's panel and then I have also been asked to give a brief presentation of one of the pilots that we're running on behalf of the PUC.

Who -- for those in the room, who feels really comfortable talking about financing or who would like -- no, okay.

So, why financing. Let's start there. So, rebates and incentives alone and taxpayer dollars or [indiscernible] payer dollars aren't going to get us to our goals. There is about an $80 billion need in building retrofits in California when you look at our building stock in Title 24. The need is great. And as I mentioned, we can't do it on taxpayer dollar alone. So, we need some creative market solutions, and really a public private partnership to address financing in general in this market.

I've been focusing predominantly on energy efficiency lately, whether it's renewables or EE or water. And also, that public side has to be there to -- especially to get to that low, moderate income market.

So, this is a slide that I borrowed from a presentation by the World Bank in 2015, and it offers a continuum of the different types of financing products out there. And if you start at the bottom up, we would start with free installation, grants, rebates, subsidies, these are the highest, kind of public interest, public subsidized types of financing. And then maybe you get into budget financing or grants with co-financings or on-bill financing with the utilities, revolving loan funds. And as you work your way up this ladder you get to private market financing aggregation and securitization.

A lot of folks talk to me about, well, have these funds been securitized? Have we really mobilized that secondary market? Because when we talk about financing that's kind of -- that's really at the industry adoption of growth and scale. That isn't easy to say when you talk about low-income barriers.

So, in the study there are four recommendations. One, is for the PUC to consider tariffed on-bill pilots, and we'll be talking a little bit about that today from one of our panelists. Two of the recommendations were for the legislature to consider authorizing low-income customers the option to use care, which I'm excited to learn more about today. And, also, potentially for the State to adopt credit enhancement or risk sharing to address market rate, low income multifamily housing, or across all industries in our disadvantage communities. The fourth was that the State should explore a social impact bonds. So, there's a quick little overview.

Before we launch into the presentations by the panelists, again, one of CAPFA’s roles right now is to help administrator the California HUB for Energy Efficiency Financing. This program has been under development for a few years. We’re working on launching sequentially as we speak. And I’m just going to take a few minutes to talk about what we're doing and how we’re leveraging private capital here.

In 2013, the PUC approved $75 million in funding to development the California HUB for Energy Efficiency Financing. It's a collaborative public private partnership established to get more capital providers into the energy efficiency market and lower the costs and expand access to financing. Really removing that barrier, that upfront barrier for energy efficiency retrofits. Once developed it’ll cross industries for the single family, affordable multifamily, and commercial markets. It offers a credit enhancement for a specific industries and populations. And on-bill repayment functionality with our foreign investor owned utilities. A $10 million statewide marketing campaign for both lenders and contractors.

This provides an overview of the residential pilots that we are launching, there's two with a sub-pilot. The first is the Residential Energy Efficiency Loan Program, this is our single-family program. We are supporting loans and retail installment contracts up to $50,000, which is pretty high for just EE. It's off-bill. We have about $25 million in credit enhancement. Loans can be provided to the tenant or the owner. Although a tenant hasn't come in for a loan yet but the possibility is there. And 70 percent of the loan goes to energy efficiency, 30 percent can go to other types of improvements.

We know that EE alone doesn't drive retrofits so we want to be able to provide some flexibility to see if we can get some more activity in scale. It is available in the IOU service territories. It was launched last summer. We're in a very slow uptake right now. I would say last month the PUC issued a decision that allowed us to provide a lot more flexibility into this program. So, we're really excited about being able to remove some silos that exist whenever you deal with [indiscernible] funds. And really get leverage these pilots. We're excited what these pilots can be, but it’s been a long road to get to where we are.

The other residential pilot we have is for master metered affordable multifamily. In this pilot we’ll be supporting loans, leases, and energy service agreements. An energy service agreement is just like a PPA, or a power purchase agreement, where you're buying a service and you’re not going into debt. So, for some business models it works better, especially in the affordable multifamily world where with low-income housing tax credits, debt is a challenge.

We also have two commercial pilots. One is targeted for small business with a credit enhancement, both a nonbill and an off-bill option. And then we're providing on-bill repayment for other types of projects.

So how are we trying to meet the low-income market? On the residential side where specific to our singe family program, a third of the credit enhancement funds are targeted to low-moderate income, lenders are providing expanded loan terms. So they’re lowering their interest rates, they’re broadening their underwriting criteria, they’re expanding their terms. So instead of a one year unsecured loan, they're now offering a five-year or a ten-year unsecured loan, which lowers the monthly payments over time and makes the debt easier to absorb into your monthly budget.

We're also offering bill payment history as an alternative underwriting criteria. We’re allowing single measures. So we’re meeting the borrower where they are. We're not making this restrictive to whole house energy efficiency retrofits. There’s no audit requirements. We’re actually looking to expand to go to code because of all that orphaned energy efficiency out there and given where the states going.

And so we're very excited about some of these innovative structures that we’re able to do. We're allowing financing for renters and mobile homeowners. And there’s a consumer protection element in the contractor network, and the fact that -- well this is open market, which means that a number of different lenders can participate. We're not just choosing one lender. We’re trying to get as many lenders involved as possible. But these are typically regulated financial entities, credit unions, CDFI’s, and then we’re capping interest rates.

We are looking at some modifications given the PUC’s recent decision. We're very excited about that. So for a single family program, because this is the one that's launched, again, the first loan was enrolled in July. We have over a hundred contractors engaged, we have four credit unions participating, two are offering product statewide. Again, you'll see here the loan terms are extended so that means lower monthly payments. The amount the borrower can borrow has increased because of the state's absorption of that risk with the lost reserve. Many of the credit unions have lowered their FICO score requirements, and we've seen a rate reduction of up to 640 basis points which -- and in nonfinance speak is 6.4 percent.

Over a dozen loans have been enrolled today. I’m not excited about that number, but with these changes we’ll get some higher activity. 20 percent of those have been low-moderate income. Consumer marketing has yet to begin.

On the affordable multifamily sector, these units are restricted to at least 50 percent deed restricted for affordable housing. So we’re looking at the HCD, HUD, low-income tax credit projects. We're supporting structures that allow for the off-balance sheet financing, which I mentioned earlier. And, then, because this program is set to leverage the IOU processes and infrastructure, we're developing a technical assistance support for the building owners to leverage the IOUs.

So that's my quick overview of the chief and now we get to hear from our panelists. I did pull together some questions for the panel, and as I kind of get settled, I think the best way to move forward is maybe for everyone to take five minutes in order to introduce yourself, talk a little bit about how you're addressing these challenges to the extent that you can address some of the strategies within that five minutes, great. and then we'll just open it up for Q and A.

Does that work for folks? Okay.

Al, you first.

MR. GASPARI: Hi, thank you. Al Gaspari from PG&E. I'm the manager of our residential and transaction services programs in the energy efficiency portfolio, which includes all the financing programs.

So, let me just start by what we're doing in terms of our work because we work closely with Deana and her team on the OPR and the pilot work. We also oversee all the financing offers and we call ourselves transaction services because our goal is not to place debt with people. It’s to help people overcome the first cost barrier to making energy efficiency and other clean energy investments.

So, we look at a number of different strategies for helping our programs to help customers overcome that. At the end day for PG&E’s perspective we don’t, you know, particularly want to place like one particular type of debt or one solution with customers. We want to help them make investments in energy efficiency that works best for them.

So, we do run the OBF program, which when you think about for a small business customers that works very well. That’s where PG&E operates a revolving fund of [indiscernible] dollars. It’s available for small business and other nonresidential customers. Probably 67 to 60 -- or 70 percent or so of our loans, by number of loans, go to small businesses and, you know, what we hear that the real value to them there is its zero interest, which is obviously attractive. But we use alternative underwriting, where we look at the utility bill payment history and they’re time as a utility customer to do the underwriting. And we don’t place any security interest on either the -- either the equipment or the facilities. So these are small business owners that might have to go out and get equity on their home, but we’re going at it a different route where we attach to the utility bill is disconnectable charge but it does solve some problems there.

So, in the OPR and the pilot functionality we're really excited about the EFLICK program, which is going to be a residential on the bill offering for customers. And why we're excited about that is we think that the payment plan option, which could be up to about $2,000 is a really unique opportunity. So, you have a lot of technologies that are coming on for customers and this could be anything from smart -- some of the energy management technologies, to even like weatherization and other like high impact things that are up to $2,000. So that's not really like being served by PACE or even unsecured lending because it’s very small. But it can become a first cost barrier to customers. So we think that by allowing them to be repaid on the PG&E bill that will help to -- improve access to customers and also because customers are used to doing business with us, when they see us we think that it will help to lower opportunity costs there. And that covers all sectors and we’re working hard to get vendors the support for small businesses and low income customers.

In terms of, you know, overall work you know we really focus on coordination with all of our programs. So in the residential sector we coordinate with our ESA team on the low-income side, our rates team, and all of our CES programs to make sure that our offerings are integrated. And this would be for multifamily buildings where we’re targeting the owners with OBF. We have an expanded OBF capacity for multifamily buildings now we can go up to ten years and up to $2 million potentially for multifamily buildings that are for low-income people. We're also working with, you know, different programs for direct install and where we can offer by really targeting financing options especially at our market rate options. We’re able to expand the availability of our direct install programs to more -- more customers, which allows us to serve more moderate and low-income customers there. We’re also looking at the feasibility of some of the tariff financing solutions that are available. So, we have a team of accountants and, you know, we work with our lawyers because what we want to do is come up with something that is feasible from, you know, a regulatory legal and from a customer perspective to really help to overcome the first -- the first cost barrier that the customers have.

So there’s a lot of analysis that has to go on because the potential laws that impact it are not just in California they go out to -- there's, you know, U.S. bankruptcy laws and other lending laws that have to be complied with. So you have to design something that's going to work for customers. So there.

MR. WYNNE: Thank you. My name is Justin Wynne. I’m here on behalf of the California Municipal Utilities Association. I think my role here today is to give the POU perspective on these different programs. I think one of the things that was discussed earlier is that POUs really value flexibility and I think it's really important that they’re able to tailor their programs for the unique characteristics -- the unique characteristics of the communities that they’re serving.

And that's particularly true for low-income programs, because if you look at the wide diversity among POUs, you could look at, for example, some POUs have low that's almost entirely commercial or industrial. Other POUs are serving communities where the poverty rate is double what the statewide average is and so between these different POUs they’re going to need very different programs to effectively serve their communities.

Another high level comment is that I think POUs generally view energy efficiency as a customer service and I think that affects when they're looking at the success of a program, particularly as it relates to cost effectiveness, I think they're going to have a different perspective than maybe the IOUs or when others are looking at energy efficiency programs.

As I was talking to the POUs about these financing options and low income programs, I think across the board what I heard is that the POUs right now are re-evaluating all their programs to make sure they're effectively providing services and benefits to low-income customers. And part of that is reconsidering whether there's financing options that could be targeted towards low income customers.

SMUD not surprisingly re-evaluating and looking at some of the financing options. NTPA is preparing to go out with a solicitation, looking for proposals on financing for energy efficiency and that would partially affect low-income programs.

As far as what POUs are actually doing right now on financing related to energy efficiency ,I think very few POUs have programs that they're running that's providing that type of financing. SMUD has a program that has existed for quite a long time. I think it provides up to $30,000 of benefit, there’s a 15-year repayment, and I think the current rate is 6.99 percent and there’s differences on what you can get and the different rates based off of its secured and then the types of home. That program isn't targeted at low-income, as a homeowner component requirement, and it also has certain credit requirements and I don't think the intent was ever for that to be the primary low income program. There are obviously -- SMUD has a wide variety of programs that are targeted at low-income and very aggressive for like deep energy efficiency retrofits and things like that.

The city of Lodi does have an on-bill financing program but that's limited to commercial and industrial and so it's also not targeted at low income. So I think the main thing the POUs are doing on low-income programs, one of the biggest programs, obviously, is just rate discounts and so the majority of the POUs and I think the biggest dollars are going towards directly reducing rates. that is very clear. It’s very straightforward. It’s very popular. And so I think when the POUs are looking at some of these other programs, they're evaluating it against just the very straightforward rate discount.

Specific to energy efficiency I think the biggest thing would be the weatherization and direct install programs. A large number of the POUs have these programs they're either income limited or they've been designed with low income customers in mind. And they do things like HVAC, refrigerator replacement, windows and -- I think one of the appeals of the direct install is that it's very simple and it's easy for the customer to understand. And in a lot of the cases when I've been talking to the utilities they basically do everything for the customer. So all the customer does is fill out the application, the Utility sets up the installation, they do the auditing, they do the inspection, make sure the installation was done correctly, and then it's also, because it's no cost, it's available to a much broader range of customers. And, so, when, I think, when the utilities are considering some of these other options I think the direct install is sort of what they're measuring that against.

One of the other things is that it's been very successful through the direct install, partnering with other entities and so they've -- I think one of the more common is that they work with the local gas, PG&E, or So Cal Gas, and then also local nonprofits and then other local governments and so they're doing one combined audit, one combined installation. And so that's been a very effective -- it seems that's pretty consistent among the POUs is that they've focused on leveraging with other programs.

One of the other things I heard is that because of the direct installs customizable so they can – each utility can look at its customer base and pick a menu of different options that are best suited to its community. It's helped make the direct install very successful for them.

So I do have -- I've got a lot of input from the POUs about on-bill financing specifically, but I assumed we will talk about that in a subsequent part of the --

MS. CARILLO: Yeah.

MR. WYNNE: Okay.

MS. CARILLO: Let's see if we can get to those questions. Thanks, Justin.

Stephanie.

MS. WANG: Sure. Hi, I'm Steph Wang. I'm the policy director of the California Housing Partnership.

We're a nonprofit organization that was created to help come up with financial solutions for creating and preserving affordable housing for the long term, working with nonprofit affordable housing organizations. And I run our sustainable housing program that focuses on how can we help to bring clean energy, energy efficiency, and sustainable water resources to affordable housing.

I'm really excited about some of the opportunities that we’ve been talking about today. When Al was talking about on-bill financing and increasing the -- changing the terms of ten years, increasing the limits to 2 million, that's -- for us, we think that that's going to be a really promising solution for multifamily affordable housing. And, in fact, in anything, what we're concerned about is that generally we get in the regulatory proceedings we get authorization for the -- for utilities to expand -- investors and utilities to expand the -- to use the program for energy efficiency and perhaps specific energy efficiency measures and not at the same time for solar or demand response or energy storage.

I think when we were looking earlier at Deana’s presentation we saw, okay, so we can -- the multifamily pilot for on-bill repayment, a different program, includes energy efficiency and solar, hot water but not distributed generation; right?

And so we end up in these situations where when you're thinking from -- from a low income -- when you're thinking from low income property prospective of, you know, how do we reduce these utility bills and help to long-term preserve the affordability and health of this housing, you don’t think in terms of like, oh, well, I really wanted these specific energy efficiency measures. You think in terms of what was the overall project I wanted to do that was going to be best suited for this particular location and how can we, you know, cobble together all of the incentives from all the different state and local programs, and then what gaps do we have left that we would need to use financing for.

And a lot of times we'll have a financing program that's designed, not to fill in the overall gaps for a comprehensive project, but instead for -- to supplement a very specific program. so it would be ,well, you can use this financing specifically for certain energy efficiency measures or specifically for, in theory, solar or something like that. When really what you wanted was not necessarily granted, the incentives may not completely cover each of those measures, but at the same time that you had other costs too and you wanted to do a broader project that was beneficial for low income renters.

And so, you know, I'm really hoping that this is a great opportunity that where the agencies are going to work together and be thinking about financing, you know, take a step back from the individual programs that, you know, we may have -- that we're authorizing individually and think about how does financing fill gaps and work with the various programs instead.

And similarly I wanted to think about when we think about the individual, like what offerings we need for multifamily affordable housing, you know, I think it made a lot of sense as Deana was talking about, you know, other solutions like energy services agreements and leases, you know, other options. but a lot of times we find that what products may be available are for, you know, the more low hanging fruit, not the whole building retrofit.

Again, a lot of what we hear from owners is, you know, the hard stuff is what they need the financing for, they need for the really deep retrofits, for the combined projects and not, you know, not for the light bulb swap outs or their toilet swap outs; right?

And, so, how do we make sure, you know, how do we spur our marketplace for these deeper retrofit products because otherwise it's just -- that's not going to be a solution for mitigating the risk. Because the reason why those -- some of those other products are interesting is because it’s very difficult for, not only for multifamily but for housing owners to take on secured debt, but also it's really difficult for them to take any risk that they’re going to have to pay back on what -- I’m not going to call it a loan because it’s not debt. But even their other forms of financing, if there's -- if they don’t have a lot of assurance that they’re going to get the utility bill savings that was projected, as projected performance; right?

And each of these affordable housing owners they’re main job is not, you know, being really excellent at ensuring that energy efficiency savings are going to materialize and ensuring that all of their tenants are going to be really great at the performance.

So, you know, how do we spur these other opportunities. and I think I'm going to leave it at that.

MS. CARILLO: Great. Thank you, Stephanie.

Tammy.

MS. AGARD: Good afternoon. I may be the only person who came in today from Arkansas. I’m thinking that might be the case.

But my name is Tammy Agard, and I am President of a benefit corporation in Arkansas that serves as a program operator for energy efficiency financing programs in under states. I'm honored to be here today to contribute to these action oriented deliberations about implementing the CEC’s recommendations in the barrier study, which as I understand it suggests that every type of energy utility in California, at least consider, introducing inclusive financing through a tariff on-bill program. And that's kind of what I'm here to talk about today and offer-up.

We agree whole heartedly with this recommendation based on our experience as a program operator on the ground in the Arkansas Southern delta region where we operated both an on-bill loan program as well as an option tariff program called Help Pays. To back up just a step, the home energy lending programs are on bill offering, and the home energy lending program Pays or Help Pays, is the same program based on the same objectives and collaborations and everything else that we built in the lending program but with the op tan tariff as the financing mechanism.

Since the barrier study describes how inclusive financing works through the option tariff just to highlight. It basically allows the utility to invest in any upgrade on the customer side of the meter as long as those upgrades are cost effective and it allows the utility to recover its costs with a charge on the bill that is substantially less than the estimated savings.

The program design that we used in Arkansas is based on the pay system, pay as you save system, which is the same system used by utilities and approved by commissions so far in states like Kansas, Kentucky, Arkansas, North Carolina, and New Hampshire. I actually understand that there are a few monies here in California in the Byron counties area that have gained some experience with the pay system as well.

So with that background, I'd like to offer up three short points in support of your action plans for implementation today. Number one, we built upon our experience with our on-bill program as I mentioned in order to introduce a more inclusive tariffed on bill program because we were not able to reach the lower income populations, particularly renters and multifamily, that we really set out to reach. We just frankly were not getting the participation levels that we wanted. And when we did that, approximately just a little bit over a year ago, what we found was explosive change. And by explosive, I mean, our participation rates, when we switched the tariff, increased times three. The investment utility per location more than doubled, and that's largely due to the utilities willingness to invest in HVAC equipment with the tariff being used as a security as opposed to loan or credit worthiness or debt, et cetera.

And some interesting news to report in particular in some -- I won’t -- I was only here for the last hour, hour and a half or so you but I did hear quite a bit of discussion around multifamily and renters, et cetera. And one of the things it may be hard for people to believe in this room but it’s true is that although there are only 85 multifamily units in the Arkansas delta region where we operate this program, one hundred percent have now been retrofitted with deep energy efficiency upgrades, one hundred percent of them, all renters said, absolutely, yes to this option. All renters are experiencing $15 to $20 a month in savings, while that’s -- in addition to paying back the tariff charge to the utility. While that’s not a tremendous amount, it is in the delta region where the household median income is about $29,000 a year. And the units I'm talking about that we retrofitted rent for around $250 a month.

So, it's been an outstanding success and a just, apples and elephants difference when we use the tariff terms as opposed to the loan terms, otherwise it was the same program. The second thing I want to offer up where I think that potentially California can benefit, which by the way California is my home state. Is the technical assistance that is now available through the experience of practitioners with experience in other states, and I mentioned some of those a moment ago. But one in particular Roanoke Electric Cooperative in North Carolina made -- basically essentially a ready-made resource for managers following the CEC’s recommendation to consider tariffed on-bill for energy efficiency upgrades. And that's available right now, and it's very well thought out tool I've used it several times when utilities approached me about interest in -- their interest in considering tariffed on-bill and that's available just to the click of a button. Also the Southeast Energy Efficiency Alliance otherwise known SEEA, they now offer technical assistance programming for stakeholders for states all across the country not just limited to the southeast. In fact, there’s an active webinar right now all about inclusive financing that's recorded and archived and ongoing.

And then, lastly, we’re a tiny little program operator in Arkansas, I have no aspirations to believe for a second we would come out here to California; however, we have managed to meet quite a lot of folks who have gotten their elbows and knees dirty and kind of figured this out and, you know, it's funny I have to say this but I am saying it, is if we can figure out in the Arkansas delta, my gosh, I’m positive you-all could figure this out here.

But anyway, having said that, we would be happy to -- our company would be happy to assist program operators here in California who are much, I'm sure, equipped in resources, et cetera, to be able to, you know, do this sort of a transfer. But we'd be happy to help facilitate any of that. And, then, lastly, my last point is that inclusive financing using a tariff, based in particular on the pay system, which has tremendous consumer protection pieces built in. One of the things Stephanie mentioned a second ago was making sure that the person who takes advantage of the offer actually does get the savings that they’re supposed to get. This is a critical component of the pay system and I think probably the most critical reason why we've been so successful is that it’s a -- we follow what’s called an 80/20 rule, wherein, 80 percent of the savings that the customer receives post-retrofit are used to pay the utility back. Its cost recovery, but 20 percent of those savings stays in the member’s pocket. It’s not an option not to go that route. So, therefore, our contractors are performance based, they’re paid for targets, achieving those targets, targets are met.

And I'll leave it with one other point on that, with regard to hearing a lot of the panel before I got here, up here, talking about the jobs this is something that we are seeing first-hand in the delta region, which has been really, really motivating me quite a bit to see that not only contractors, you know, with this kind of level of scale and deeper impact comes more jobs and comes actually even the ability for some folks who are blue collar workers who came into this as much such to start their own companies and grow and hire their neighbors, which we are seeing -- we’ve got a company down there that now has 11 employees and he started out, you know, doing installation up in the attic now he owns his own company.

Literally retrofitting, you know, neighbors and family members homes in his neighborhood.

But any rate, just in closing comments, I want to point out that once again we were able to build upon what we started. We didn’t ditch all of the efforts and everything that we put forth to create the loan program. We just switched over to the tariff as a financing mechanism and the success speaks for itself. I've got handouts here. I’m happy to leave with you guys reports online the difference that it made to our programs once we launched the tariff. But as far as company, we are no longer interested in operating on-bill loan programs because of the success of the on-bill tariff. it's that strong in our -- in our prospective looking forward.

So, I’m glad to be here and welcome to take any questions you have later. Thank you.

MS. CARRILLO: Thank you, Tammy.

Erica.

MS. MCCONNELL: Thanks, Deana. And thanks so much for the opportunity to be here on this panel. My name is Erica McConnell. I’m an attorney with the law firm Shute, Mihaly, and Wineberger, and here on behalf of the Interstate Renewable Energy Council, IREC.

I'll just start by giving a little bit of context to IREC's work in this space and then talk specifically about our clean care proposal, which involves the redirection of care funds into investments and renewable energy. So, IREC, for those not familiar, is a 501C3, independent national nonprofit organization whose goal is to expand access to renewable energy, clean energy, and energy efficiency to more energy consumers. IREC has a regulatory program which is what I work on, also work on workforce development and consumer protection. Within the regulatory program, core focal areas include: community and shared renewable energy, and that's really what the clean care concept grew out of. But IREC also works on interconnection, energy storage, and grid modernization. Within that the shared renewable energy program area, you know, in line with IREC's over-arching goal, the goal is to expand access to renewable energy to all energy consumers, that includes low-income energy consumers and those in disadvantaged communities. And as part of our efforts in that space IREC developed policy guidelines and model provisions for low income shared renewable energy programs about a year ago and really it looks a lot like the barriers report but focuses on a particular area, community solar. So we looked at the different barriers and at potential solutions to those barriers to increasing access, not surprisingly a lot of the big barriers are financial, including access to capital and credit and so we identified various solutions in place for community solar but also in other spaces, like energy efficiency, like on bill financing. And thought about, you know, how could those maybe be applied in this context.

So clean care kind of fits into that piece of IREC’s work. it actually predates that report, however, it's a concept that we’d been working on for about four years now and really came out of looking at these community solar programs and hearing people say, oh, those -- that’s the way that that low income people are going to get access to renewable energy but not really seeing that happening in practice. And so thinking about what are the tools that we have that we could use to make this work. We're really happy to see the clean care concept mentioned in the Barriers Report and to make its way into the recommendations because we think it is really an interesting solution and promising solution to this problem.

So the basic idea is that care for -- someone from Arkansas or anyone else who might be listening, not familiar with California, is the low income rate par- assistance program here. the idea is that customers who would be eligible for the care program would elect to participate in clean care, they would move on to regular rates, so they would leave behind their care rate subsidy and that subsidy instead would be invested in a portfolio of shared renewable energy facilities. So the customers on a regular rate, their investment -- their subsidies invested in those facilities and then to realize the bill discount that's required by the care program they would receive net metering credits that would be associated with their proportionate share of that portfolio of generation.

So from the customer's perspective their bill should look the same or potentially even lower then what it would have looked like under the care program but instead of via a rate discount. It would be via an electricity bill credit. So from the customer's perspective the real goal would be to make this simple and a choice that they would make, they wouldn't have different providers marketing things to them. There would be marketing and education to make sure that they understood what was going on but a lot of that administration would happen by the utilities and potentially a third party administrator working together to say, okay, this customer signed up for the program or moving them to the regular rate and we’re applying the requisite number of bill credits onto their bill that their share and that keeps their bill at that level or lower than they would have received if they had stayed on the Care rate.

You know, the real elegance we feel of this proposal is that it relies on the existing Care funds and it achieves that same Care mandate of bill discount but also achieves some of these other goals connecting customers with direct participation in renewable energy, all the environmental benefits associated with that and potentially, you know, the job benefits that could come with market building in the sphere.

But it would require thinking differently about the Care program and I think we're very sensitive to touching the Care program. I mean, Care is a – is the envy of many other states low-income advocates and other states and it’s something that other states look to. So certainly that -- IREC has been working on this proposal with environmental justice advocates, consumer advocates, the solar industry, lots of stakeholders and that was a strong message that we got is, you know, be very careful in opening this door.

But at the same time, a lot of enthusiasm about this idea, you know, if it works this could be a really great way to use these same dollars to achieve a multiple benefits on the -- I think it was the prior panel or maybe earlier in the morning, somebody was talking about starting small. So our idea here would be pilot this idea at first, work out the kinks, and then potentially if it were working well expand it. so start with a small number of megawatts and a small number of customers, maybe the highest usage customers and expand it from there.

As far as the status of Clean Care, it continues to be a concept and not something that actually exists in practice in California or anywhere else. IREC is purely a regulatory actor. We don't do any legislative work. So we've been working at the -- the PUC. Clean Care has been under consideration in a few different dockets there and has benefited from a lot of discussion. Within those dockets it's been refined since it was first proposed. And I would say IREC is very open to feedback and further discussion on the concept that organization doesn't have anything to gain from Clean Care. We really think it’s an interesting idea that could end up really benefitting a lot of low-income people.

Like I said, this is still a concept. This is not other states. We've heard lots of interest in other states. I think this topic of financing for low-income customers is cropping up in a lot of the leading -- we’re hearing a lot of discussion in New York on this topic. But California historically has been on Care and a lot of programs has poised to really be a leader here I think and to continue that trend.

And, again, really the impotence here is to use the existing Care funds in a way that it not only achieves that bill relief, that those customers need, but also potentially other goals. So that's the underlying gist of it and I'll leave it there.

MR. WEISENMILLER: Yeah, I would, again. And what I would tend to say is we tried in the barriers report not to get into specific pending POU cases.

MS. MCCONNELL: Okay.

MR. WEISENMILLER: You know, basically -- the basic measures in a way is to focus over there. You know, obviously having worked with both Sylvia Segal and Lenny

Ross back in the 70's, you know, Care is an incredibly important program in California that whatever we do we can't screw up.

MS. MCCONNELL: Yes.

MS. CARRILLO: So, I've identified at least one question and it might require -- and I don't know how much time we have or if commissioners have any additional questions.

But I would define -- just for the sake of the folks in the room – there's three structures that have been discussed -- well, several. There's on-bill repayment, which means that there's a third-party lending to your customer and it's getting paid on utility bill, there's on bill financing where the utility is lending the money, all though I think some may oppose that term lending given some of the utility legal constraints in issues. But that's the word I will use. And then there's Pays, which -- Tammy, correct me if I'm wrong, it is when the utilities paying for the installation and then the cost of that item gets repaid on the utility bill based on savings?

MS. AGARD: Well, no, that's correct but it's tied to the meter for security. So there's no loan or debt or income check. There's no qualifier other than the --

MS. CARILLO: Right. And does it transfer with the meter?

MS. AGARD: It transfers with the meter.

MS. CARILLO: It transfers with the meter?

MS. AGARD: Correct.

MS. CARILLO: So those are the three different structures that have kind of risen to the top as well as Care, which I'm still learning about. And I think we have some very different experiences on the panel, with PG&E having some good success on small business and expanding terms for OBF, for multifamily. We haven't quite heard the POU position on OBF or OBR. I wasn’t quite sure which one you had surveyed them with.

And, Tammy, I’d be interested in hearing a little bit more about the shift in your experience of whether utilities were doing OBF or OBR and, you know, with their own capital and moving and what that decision was based on.

So I think we might have time -- this is interesting to me.

MS. RAITT: Just a quick time check. We were going to close the panel in about 10 minutes so.

MS. CARRILLO: Great. So speed answers.

MS. AGARD: Well, what specifically was the –

MS. CARRILLO: I think, let’s start with the POUs since you had it tasked up.

MR. GASPARI: Sure. So, I guess, just the – initial comment is that when I was talking to the POUs about the different financing options, I think, what I was consistently hearing is the direct install program it’s successful, it’s simple, and when they’re looking at other options they’re comparing it to that. And so it’s always in reference to what the existing programs are and because they will be competing against each other I think that’s sort of the consistent theme that I heard.

But for the on-bill financing options, one for the top concerns is that for most POUs their billing system doesn’t accommodate it and they would need to upgrade their billing system. And for some utilities that would be millions of dollars. And just the decision, it’s also just changing your billing system is a very complex process anyway. And so that's really a prohibitive barrier to some. There’s also the complexity with some of the utilities that they -- if you’re a municipality sometimes you have multiple different utilities all a part of the same bill. So you might have water, sewage, and other things all in the same bill.

And there was questions about how on-bill financing for energy efficiency project fits in that type of billing structure.

And other problems like -- the understanding is on-bill financing requires the bill to be issued on the same day every month and some POUs have floating bill dates. I don't know if that's --

MS. CARRILLO: They have. It's a challenge.

MR. GASPARI: Yeah, and so -- the thing is this is a very narrow program, there's alternatives, and so are you willing to do these massive changes to fit just the single program. But the -- just the -- some of the larger concerns are even if we can address those issues, there's still the assumption that on-bill financing has relatively high administrative costs compared to some of the other options. And tied to that, there's the concern that due to the complexity you might not have a high adoption rate. And so you might have this more expensive program that less customers are using. When those dollars could have been spent for like a deep dive free program.

And, like, some of the input that I got, I think the City of Needles mentioned that a significant portion of their direct install participants, their annual income is like $11,000 a year or less. So, there, just don't believe those customers is going to want to sign up for $20,000 energy efficiency upgrade and take on all the risks associated with that.

MS. CARRILLO: Right.

MR. GASPARI: Very last thing. Like when these ideas have been presented there's just a fundamental response from like boards and city councils that they don't necessarily feel like the utilities should be in the business of loaning to its customers. And so I think there's just a discomfort at the elected official level with taking on these obligations.

MS. CARRILLO: Got it.

So, Tammy, since you traveled the furthest, you get extra time. I'm using my discretion because I think I know what Al's going to say.

But maybe you can share what that shift to pays looks like. I mean, I think the reason might be kind of obvious, if people don't want to borrow at a certain income, I mean, I think we need to think about our population and who needs direct install and who we really want to put into more debt.

MR. MCALLISTER: Can I actually layer a piece end to this question too.

MS. CARRILLO: By all means.

MR. MCALLISTER: I am also interested in knowing how you know what the savings outcomes have been and whether it’s at the, you know, probably not the specific project level but at the portfolio level. What are you doing to sort of say, hey, this is actually producing the outcome that we’re looking for in terms of energy.

MS. AGARD: Well, it actually is at a specific house. Believe it or not we do --

MR. MCALLISTER: Could you explain all that, yeah.

MS. AGARD: Yeah, sure. Where to start. Well, I'll start with your question because you’re sitting up there and I'm down here. So I’m going to make sure that I get that one. So what we do after the retrofit occurs is on the actual day that the tentative work is scheduled to be finished there's a call in for inspection where a utility employed person, typically a lineman or a line woman, is called over to do what we call a final inspection where the contractor has set up a [indiscernible] pressure pans, whatnot, for the service person to walk through the home and inspect. It takes about 20 to 30 minutes, record retrofit numbers, new [indiscernible], et cetera, photograph and then upload the results.

And then smart meters is a great help that one of the best pieces of our QC tool kit can really flag us if we’ve got any kind of problem out there. But typically the estimates that we give, the cost effectiveness analysis estimates on the front end are fairly conservative purposely. We cannot put a participant in a cash flow even neutral position when we're promising energy savings. And so we take that very seriously and our contractors, again, are paid for performance paid for results. There's consequences to them if they don’t achieve those targets.

Did that answer your question?

MR. MCALLISTER: Yeah, for the most part. Instead of digging deeper, maybe we'll let you answer Deana’s part of the question.

MS. AGARD: Okay. So to your part of the question, how did we sort of go from on-bill loan --

MS. CARRILLO: Yeah.

MS. AGARD: -- or on-bill -- So this -- it's kind of a hokey story, but I'm here and, I guess, I might as well tell it. This Rural Electric Cooperative has a general manager by the name of Mark Casey. The Rural Electric Cooperative is called [indiscernible] Electric Cooperative and it’s in the Arkansas delta region. And I got a call up from Mark Casey one day asking if there was anything that I could do -- my work at that time was with the Clinton foundation in Little Rock, which is how I ended up Arkansas. And if we could potentially help them with some sort of on-bill financing solution to reach the lowest income populations in the delta region, which they were really not able to do much for, knowing full well, potentially -- or particularly with the power plan and what was coming on the horizon for Arkansas that already very, very burdened members of the community were going to face very real trouble in the near future.

And so he was desperate really to find a solution that with would work. So we kind of put together what we thought might help out with the on bill loan model and it was to a point successful. I don't want to say it wasn’t. It was to a point successful but we were not able to reach renters, much like what you said earlier, not many renters want to make an investment in a landlord’s property. I mean, why on earth would they. An awful lot of folks were versed to taking on debt especially when they were already living in difficult circumstances and couldn't quality for any kind of loan.

So long story short, that wasn't acceptable. Once we launched the on-bill loan program we were still unable to reach those most vulnerable populations within the delta region and so Mark was not done. And this was about two years ago or so I had come across the idea of the pays tariff, Ms. Holmes Hummel, Dr. Holmes Hummel, at a convention and learned about the tariffed on-bill option and just kind of took a deeper dive into it. Went back home to Arkansas and told Mr. Casey about it and we couldn't get on a call fast enough. And after he did his due diligence and talked with his boards, it seemed quite frankly a no brainer. So we switched over to file with the public service commission, got unanimous approval. The hardest part for the commission was to believe that we were filing for a tariff to lower a utility bill, which was -- but there was precedent in the other states. So, anyway, they unanimously approved it fairly quickly. We had already had our on-bill financing loan program up and running. So really, again, all it was switching over to the tariff for the financing mechanism.

MS. CARRILLO: So I have one follow-up question, unless there are others.

MS. RAITT: I'll also just mention that we are at 4:15. I'm sorry. I know this is an interesting conversation.

MS. CARRILLO: I'll get to ask it afterwards.

MS. RAITT: Okay.

MS. SCOTT: Ms. Agard, you mentioned that you had brought some handouts for us. So, if you could please make sure that our team gets it or our public advisor, so we can get it into the record. I think we'd all be interested in seeing that.

MS. AGARD: I don't know who those people are. But its right here, the whole pile.

MS. SCOTT: Thank you.

MS. AGARD: You're welcome.

And I'm going to be spending the night here and flying out early in the morning, but if anybody would like to visit afterwards -- I've only been on the ground for two hours, so I've got plenty to give still, contribute if folks find it helpful.

MR. WEISENMILLER: Thank you.

MS. RAITT: Thank you all very much.

MR. WEISENMILLER: Is there public comment?

MS. RAITT: Public comment? I don’t know. I don’t have any blue cards but maybe somebody in the room wanted to make comments and this hasn't -- hasn’t gotten a blue card to me yet.

If not, we can go ahead -- there is one person on WebEx who would like to make comments.

MR. WEISENMILLER: Great.

MS. RAITT: So that is R. Bong Vergara. We’ll got ahead and unmute your line. If you’re still there, go ahead and make your comments.

MR. VERGARA: Thank you. My name is R. Bong Vergara, and I comment on behalf of Conscious Youth Promoting Health and Environmental Resilience or CYPHER for short. CYPHER is a public interest incubator for the grass-root CleanTech in developing and least developed places. My comments are on following topics: how to measure the impact of proposed regional service centers, and how to link social equity to green [indiscernible] option in low-income communities regarding the one-stop shop, the proposed one-stop shop regional service centers and the indicator system. I think that -- I think that in planning the regional one-stop shop service centers and how to measure their impact SP350 implementation. It would be important to consider two things. Number one, differentiate indicators from benchmarks. While indicators tell us what is currently going on, benchmarks unify our efforts towards a future targets state.

And I have a set of three recommendations as far as the value of differentiating indicators from benchmarks. Number one, a set of universal indicators should be considered to assess what is going on in green [indiscernible] option in low-income communities across the State. Number two, community defined benchmarks should be considered at the county and municipal level. And these benchmarks should be directly related to broader state level benchmarks on the green house [indiscernible] reduction targets. Number three, these indicator and benchmark systems should be Geo coded and available online in the same way that census data is available online at the aggregate and census track levels.

The second part of my comment on one-stop shop has to do with ensuring that those indicator and benchmark systems directly support climate resilience policymaking. Both indicator and benchmark systems should facilitate climate resilience from the start -- standard, top down predict and prevent approach and also from a more bottom up resilience building approach premised on promoting local innovation.

There are three parts to this second part of my comment. First, indicator should facilitate planning, and benchmarks should condition investment. Number two, indicators should facilitate planning, and benchmarks should support and encourage local control of climate resilience. Number three, indicators and benchmarks should facilitate community engagement and by building resilience at the nexus of regional scales, food, energy and water systems in order to achieve two things. A, shore up hidden vulnerabilities in the infrastructures and resources supporting basic community needs in the era of climate change specifically basic community needs of food, energy and water.

MS. RAITT: I'm sorry to interrupt. But we will need you to wrap up your comments, please. Thank you.

MR. VERGARA: Sure. And Number two, address related system overlaps impacting both human and [indiscernible] health. And finally, I think that social work should be considered as a professional ail by CEC and CPUC. There's a new framework now in the form of the

American Academy of Social work and Social Welfare grant challenges through which social equity could be used as a practical tool.

MR. WEISENMILLER: Okay. Thank you. We will look forward to your written comments but at this point we're going to need to move on.

MS. RAITT: Okay. I did get a blue card from person who had to leave. So I can go ahead and read the comment if you like.

It's from Celia V. Andrade, Director of Pacific Asian Consortium in Employment. She wrote, thank you for convening this workshop. We are mostly happy with the general recommendations; however, we strongly recommend that CBOs be appointed as members to the proposed task force so they are actively involved in developing programs in low income and DAC's.

MR. WEISENMILLER: Thanks. Heather, would you remind people when comments -- written comments are due?

MS. RAITT: Yes. Written comments are due on May 30th and all the information for how to do that is in the notice.

MR. WEISENMILLER: Great. We're looking forward to everyone's written comments, to give you an opportunity to dig into what's been a pretty rich series of conversations.

And, so, again, please file written comments and thanks for your participation.

Meeting's adjourned.

(Whereupon, at 3:06 p.m., the workshop was adjourned)

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